

CONFIDENTIAL COPY



CONFIDENTIAL COPY



AMAZING® STORIES

JULY 1988

Memories of the future explored in ...

\$1.75 USA

\$2.25 CAN

AMAZING

STORIES

K • 47734 • UK: £ 1.25 • JULY 1988

John Barnes
Rebecca Ore
Geoffrey A. Landis
Phillip C. Jennings
Harry Turtledove
& Kevin R. Sandes



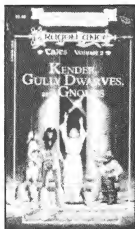
DragonLance

Tales

The MAGIC of KRYNN
Created by Tracy Hickman and Margaret Weis

KENDERS, GULLY DWARVES, and GNOMES

Edited by
Margaret Weis
and Tracy Hickman



LOVE and WAR

Created by
Tracy Hickman
and Margaret Weis



The finest collection
of exciting tales
ever told about
the fascinating,
lovable, and brave
characters of the
DRAGONLANCE®
saga.

Don't miss them!



DRAGONLANCE and the TSR logo are trademarks owned by TSR, Inc.
©1987 TSR, Inc. All Rights Reserved.

Argos

**Fantasy and
Science Fiction
Magazine**

Winter '88: Larry
Niven, Janet Morris,
Jack Lovejoy, Mike
Resnick, and others.
94 pages.

Spring '88: Keith
Taylor, John Brunner,
Elizabeth Scarborough,
Janet & Chris Morris,
Dean R. Lambe, and others.
136 pages.

Single copy price,
\$2.50 plus .25 postage;
subscriptions, \$8.00
for four issues, postage
paid.

Penrhyn Publishing Co.
P.O. Box 2109
Renton, Washington
98056



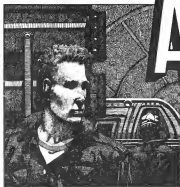
©1987
DEBORAH SKULTON

Founded in 1926 by Hugo Gernsback . . .

AMAZING[®]

STORIES

10



F I C T I O N

10 John Barnes

Delicate Stuff

31 Geoffrey A. Landis

The River of Air,
the Ocean of Sky

51 Rick Shelley

Blind Sam

**72 Harry Turtledove and
Kevin R. Sandes**

The Boring Beast

85 David E. Cortesi

Lost Child

100 Phillip C. Jennings

The Spokesthing

119 Kristine Kathryn Rusch

Repository

128 Rebecca Ore

Ice-Gouged Lakes,
Glacier-Bound Times

72



128

COVER: Janet Aulizio for "Delicate Stuff"

N O N F I C T I O N

- 111 Reginald Bretnor**
Memories of the Future

P O E T R Y

- 30 Mike Curry**
Centaurus Dream
- 49 Arian Andrews**
Fantasy of a '50s Fan
- 67 Chris Harold Stevenson**
Stellar by Starlight
- 84 Bruce Boston**
Curse of the Mad Scientist's Wife
- 99 Michael Stiles**
Lament of the Abandoned Robot Probe
- 127 Ace G. Pilkington**
Leda after the Swan
- 157 Esther M. Friesner**
Spell for a Nuclear Witch

D E P A R T M E N T S

- 6 Robert Silverberg**
Reflections
- 29 Bruce Simpson**
B FEATURE
- 68 The Artwork of Brad W. Foster**
On Exhibit
- 158 The Readers**
Inflections

AMAZING® Stories, ISSN 0279-1706, is published bimonthly by TSR, Inc., (201 Sheridan Springs Road) P.O. Box 110, Lake Geneva WI 53147. Single copy price: \$1.75, plus 75 cents postage and handling. Subscription rates: \$9.00 for 6 issues (one year) sent to U.S. or Canadian addresses. For all other countries, subscription rates are \$25.00 for surface mail of 6 issues or \$50.00 for air mail of 6 issues. **Note:** All subscriptions must be paid in advance in U.S. funds only. All subscription requests should be sent to TSR, Inc., P.O. Box 72069, Chicago IL 60678.

This magazine welcomes unsolicited submissions of written material or artwork. All such submissions must be accompanied by a stamped, self-addressed envelope of size sufficient to return unused submissions to the contributor. The publisher does not assume responsibility for submissions in any event.

AMAZING and the **AMAZING** logo are registered trademarks owned by TSR, Inc. **AMAZING® Stories** copyright © 1988 by TSR, Inc. All Rights Reserved. Printed in the United States of America. Reproduction or use of editorial or pictorial content in any manner without express permission is prohibited. Second class postage paid at Lake Geneva, WI, and additional mailing offices.

Postmaster: Send address changes to TSR, Inc., P.O. Box 110, Lake Geneva WI 53147.

Reflections



Robert Silverberg

It will be spring when you read this, but such are the exigencies of publishing deadlines that I'm writing it on an autumn morning, midway through the long limbo of grim holiday cheer that runs from Halloween to New Year's Day.

The interminable holiday season is not without its rewards, though, for the observer of modern cultural trends.

From Arlene Hirschfelder, for example, who is an education consultant with the Association of American Indian Affairs in New York, comes a plea for an end to what she sees as the exploitive use of Native American imagery in American popular culture. "It is predictable," she writes. "At Halloween, thousands of children trick or treat in Indian costumes. At Thanksgiving, thousands of children parade in school pageants wearing plastic headdresses and pseudo-buckskin clothing. Thousands of card shops stock Thanksgiving greeting cards with images of cartoon animals wearing feathered headbands. Thousands of teachers and librarians trim bulletin boards with Anglo-featured, feathered Indian boys and girls."

Ms. Hirschfelder finds this objectionable — as she does the use of such names as "Indians," "Redskins," "Braves," and "Chiefs" for sports teams. She sees all this as an affront to the Native American people. "This image-making," she asserts, "prevents Indians from being a relevant part of the nation's social fabric."

The naive response might be to say that it is the very use of these images that *keeps* the Indians part of our nation's social fabric, by reminding us that before our ancestors came to this land it was inhabited by a very different people of strikingly different culture and physical appearance. But no, that's not what Ms. Hirschfelder means by "relevant." The Halloween costumes and other playful bits of pseudo-Indianism conceal, she says, "the reality of high mortality rates, high diabetes rates, high unemployment rates. They hide low average life spans, low per-capita incomes, and low educational levels. Plastic war bonnets and ersatz buckskin deprive people from knowing the complexity of Native American heritage — that Indians belong to hundreds of nations that have intricate social organizations, governments, languages, religions and sacred rituals, ancient stories, unique arts and music forms."

She has a point of sorts here. Certainly many American Indians today lead bleak, difficult lives, as do members of many other groups who do not belong to the dominant ethnic majority of the nation. And it is instructive for all of us to remember that the way that dominant ethnic majority came to have possession of the land now included in mainland USA was to evict the Indians from most of it by a combination of force and chicanery, in a long and bloody one-sided struggle. We took what we wanted and gave them very little except rum and infec-

GALACTIC PRISONERS

Don't just read science fiction - Live it!



2440 AD - When expanding into the unknown regions of space, humans encountered a vastly superior civilization, the Nibor. Because of the highly aggressive nature of humans, peace with the Nibor was not possible. The Nibor were forced to destroy all humans except for a very few. These remaining humans have been placed on a portion of a large planet. You are one of those select, remaining humans. You will be studied by your Nibor observers.

Because of your unique personality, intelligence and leadership, the Nibor have selected you as the captain of an All Terrain Vehicle (ATV). You have been given a crew of 100 humans who were your fellow prisoners. It is your responsibility, as the captain, to provide your crew with survival.

This is to introduce you to Galactic Prisoners, a play-by-mail game. Galactic Prisoners is like no game that you have ever played. It is more than a game. It is an experience.

In a board game, you interact with one or two opponents. In Galactic Prisoners, you could interact with hundreds of other fellow players. In a board game, you have a predetermined goal or objective in order to win. In Galactic Prisoners, you determine your own objectives. Initially, your main goal will be to survive and learn. As you learn and as you gain power, your objectives will change.

Galactic Prisoners is computer-moderated. You don't need a computer - we do. You send your turns to us. Your turns will be processed on a computer. You will receive a computer printout showing you the results of your actions.

There are numerous avenues of play. Some of you will build walled forts to defend yourselves. Some will build a vast labyrinth of tunnels below the planetary surface. Some will establish colonies to increase production and income. Some will form corporations in the player-controlled stock market. Some will become warriors and take what they want from others by force. Some will do combinations of all of these. Alliances will be formed. Treaties will be made and broken. There will be much to explore and discover. Many different aliens will share this prison with you. Those of you who survive and prosper will do so because of your intelligence and understanding. Luck plays only a small part. At first glance, Galactic Prisoners appears to be an uncomplicated game. It isn't. It is a game of discovery. As you learn, you will see that Galactic Prisoners is a large, complex game.

You are permitted to move as fast as once a week or as slowly as you like. You determine your turn lengths. All turns are processed on the day they are received as long as seven days have elapsed.

To begin, send your check for \$15.00 to Grandel, Inc. to receive the rulebook, setup and 5 turns. Subsequent turns will cost \$2.25 each. Any player who recruits a new player will be given two free turns. We offer discounts under certain circumstances. These discounts could lower your price to as low as \$2.07 per turn.

Grandel, Inc., P.O. Box 4386, Wilmington, DE 19807-0386

tious diseases in return, and when the job was done, we penned the survivors up in what amounted to concentration camps.

Nevertheless, Ms. Hirschfelder's righteous wrath descends, I think, too late and on the wrong target. She fails to understand that history is one thing and myth is another, and that although myth generally evolves out of history, it takes on a life of its own that cannot be extinguished so long as the culture that brought it into being endures. Many of our ancestors (not mine, as it happens, nor Ms. Hirschfelder's) took part in a determined campaign of genocide against the American Indians. It is not a pretty part of our history, and while I feel no personal guilt over it, I do regret the destruction of the fascinating cultures that fell before the conquering Europeans. But in the process of that act of genocide certain mythic images were generated here. They hold real power for our secularized and largely tradition-free children. They are not entirely negative ones, either: most of us grow up thinking of the Indians as noble savages, primitive but dignified, who fought a desperate losing battle against the encroachments of a grubby band of pioneers. That is as much a stereotype as any other, but it seems to me not a disgraceful sort of myth to have attached to one; and if our children tend to keep it alive with their peace pipes and tomahawks, their bows and arrows, their buckskin leggings, well, so be it. It is the only history we have here, after all. And abolishing it will do not one damned bit of good for the unfortunate Native Americans who struggle against poverty, alcoholism, and tuberculosis in odd corners of our land. What earnest but misguided folk like Ms. Hirschfelder fail to see is that if we wipe our Indian stereotypes completely from

our repertoire of folk imagery, it will become even easier for us to forget all about those unhappy survivors of an ugly genocide who still dwell among us. At least so long as the kids run around with tomahawks and feathered headdresses they still have some idea that there was once another race here before us.

Meanwhile, elsewhere on the holiday front, I am informed that this year's Christmas toys run heavily toward the gross and ugly. From one major toy manufacturer comes Sammy Sneeze, a hideous plastic monster. "Squeeze Sammy Sneeze," the placard informs prospective purchasers. "Alien blood pours from his nose!"

And another company offers the Dissect-an-Alien Playset, which contains a visitor from another world whose twelve internal organs can be pulled out and reinserted like pieces in a three-dimensional jigsaw puzzle. For that extra little touch of realism the organs are covered with realistic "glow-in-the-dark alien blood."

Then there is the G.I. Joe Space Station, a \$200 item armed with Star Wars-like gadgets that can destroy any life form the universe might send this way. A squadron of interplanetary Rambos guards Earth against nasty outsiders in this impressive gadget.

Here, I think, is fertile territory for someone like Ms. Hirschfelder to explore. The American Indians have already lost their war against the Europeans; it won't be of any help to them now to ban toy tomahawks or to make the Washington football team find a new nickname. But the aliens aren't here yet. We still have a chance to instill in our children proper loving attitudes toward our green-skinned many-tentacled friends from space. Such vicious toys as the G.I. Joe Space Station and the Dissect-an-Alien Play-

set are programming today's young ones with a needlessly hostile outlook toward unfamiliar life forms. This may lead to unfortunate violent incidents when aliens do begin to arrive on our world. And if we start dissecting the first visitors from space just to see if their organs really do glow in the dark, they may answer back with undesirable belligerence. A word to the wise ought to be sufficient — and those American Indian headdresses that our kids wear ought to be useful reminders. The next time a war between widely different cultures is fought in North America, *we* may be the ones who end up on reservations.



Michael Cook:
Publisher

Patrick Lucien Price:
Editor

Martin H. Greenberg:
Editorial Consultant

Lael Dimberg
Caroline Lee Spector:
Associate Editors

Eileen Lucas
Roger Moore:
Assistant Editors

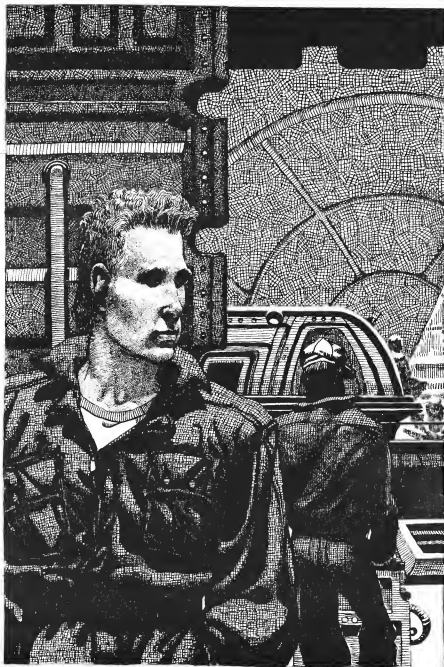
Robin Jenkins
Barbara G. Young:
Editorial Assistants

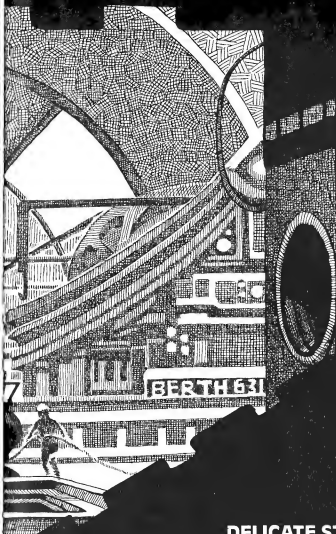
Roger Raupp:
Graphic Designer

Betty Elmore:
Production Manager

Sheila Meehan:
Advertising Manager

Patricia Schulz:
Circulation Manager





DELICATE STUFF
by John Barnes
art: Janet Aulisio

All the graphics were wobbling around in the center of their clean-and-green ranges, none falling to yellow or rising to red. Homer Bizet always loved the last hour of shaping, riding herd on the intricate patterns of thousands of rising and falling bars. There was no window into the tank, of course — some of the bacteria were photosensitive — but after nine years of this, Homer could “see” the left lower exhaust nozzle as clearly as if it were actually growing in front of him, visualize the dance of the depositor bacteria as they laid down the complex alloy lattice on the surface, knotting hexes and octagons of fourteen different elements together to form the new part.

One bar dropped abruptly toward yellow. In G/8/7, a parabolic section near the throat, cobalt concentration was falling toward minimum. Homer patched in a flow line and fed more cobalt; the beryllium and terbium bars immediately shot upward toward red. Probably the cobalt had inhibited their depositors. He cut back their flow gently and shot in a little extra metabolite for all three depositors. The bars fluxed wildly for a second or two, then settled back into steady, slow pulsing. He exhaled, relaxing — this was what made the job interesting, but it had been close for a moment.

The faint ping warned him that someone was approaching in the corridor. Finished grown metal was many times stronger for its weight and thickness than any cast or machined alloy, but grown-metal work was so delicate that nothing startling could be allowed to happen in the tank room.

Carol softly cleared her throat and emerged from the entry way in front of him. “It’s almost your shift end,” she said.

That annoyed him a little; he had forgotten to check his clock. A glance upward showed the blue remaining almost entirely eaten up by the yellow completed. “Right,” he said, “thanks.”

All the bars were behaving, still clean-and-green. Technically, running any one bar seven per cent of the time in the yellow and eleven in the red was acceptable if total time out of green on all gauges was no more than nine per cent — Homer had been shop steward a couple of years ago and knew the standards. But he liked to stay tight in green, and this was his third straight day without a yellow, fifth without a red. . . .

Homer had let his mind drift, and now C/6/6 moly was shooting up toward red. He dumped metabolite in fast, pulling the activity as high as he dared, and the bar plunged. But he had overcompensated, and before he could inject more molybdenum, the graphic had flickered yellow.

The momentary low was meaningless — it took several seconds off concentration before the probability of misshaping the sites rose above .0001 — but he still wished his long clean run hadn’t been spoiled.

Nothing more happened for the next couple of minutes. Then the bell sounded and the computer injected the tank with killers, bringing the process to an instant halt. Behind the wall, the grapple clanked faintly as it lifted the mostly complete nozzle from the stand and transferred it to the deionizing bath for fixing. Homer leaned back and stretched, trying not to blame

Carol for the spoiled run.

Although she *had* disturbed him just before it happened.

"Well," he said, "That's it for today. If you don't mind, I want to see what the holo says before I go."

"Sure," she said. "I brought the mail. There was some stuff I thought you might want to get a chance to look at before Enoch had a chance to call."

"A response?" He wasn't sure whether he wanted it to be or not.

"All three. The postmarks are within an hour of each other." Her arms slipped around him in a hug. "Probably they're all locked in a bidding war over the best grown-metal tech in the solar system."

"Moose shit," he said, trying not to smile. "You know most likely they've *all* turned me down."

"But at least you've *applied*."

The holo came back then, and he delayed opening the mail to look at the screen. Completion had gone from under eighty-six to almost eighty-nine per cent. Even allowing for the slowness of final surfacing, within ten working days he would be done, and this was the last of the nozzles. It would be interesting, finally, to get started on the major structural members.

"Just over three per cent," Carol said. "That's really good at this point, isn't it?"

"Yeah."

"Well, then they'll just have to take you. Now open the letters, Homer, before one of us explodes."

He smiled in spite of himself, kissed her lightly on the cheek, and took the mail from her. The addresses on the envelopes were a little dark and blurry — he wished again that there was money for a better faxer, and for half a dozen other things. Well, maybe there would be money —

He opened the envelope from Global Hydrogen. His father had worked three years, twenty years ago, with the teams hanging the Quito Geosync Cable, so he had a slight leg up . . . but not enough of one, according to the letter. Should he wish to retrain, of course . . .

The envelope from Tsiolkovskigrad Station Maintenance contained a polite form rejection assuring him that his name had been added to the list but that the company's orbital operations seldom needed custom grown-metal parts. There was a list of their suppliers that he might wish to submit resumes to. Every firm on the list had had a no-hire notice out for at least two years.

That left NLPF. Nihon Libration Point Facility did not want him for the slot to be filled in eight months time because two persons senior to him in experience, one of them with a better overall record, had also applied. He had come in third among 450 applicants.

But there *was* an immediate opening, non-vested, straight wage, indefinite term.

Wordlessly, he passed all three letters to Carol. She flipped through the

first two more quickly than he had; the NLPF offer stayed in her hand for a long time. Finally she said, "Well, it's immediate, but maybe you can buck them back a year —"

He shook his head. "I'll ask them, but this is 2036, and with the Moratorium on, they can offer it to another guy tomorrow, and he'll take it and ship up the next day."

She nodded, her face expressionless. "And there's no vesting. It's strictly for wages."

"That's right." At least she appreciated that it mattered to him. "Here I'm fully vested."

"With no paycheck." She looked away. "I'm sorry, but you seem to forget that sometimes."

"I bring in money," he said, "enough to pay my share and keep us living. We can keep going on our Dolework, and that's not going to go away. Besides, I'm the last grown-metal tech on the Deepstar Project. If I leave without a replacement, the project folds and I lose all the profit rights from my vesting. It would mean my last two years were for nothing —"

"And if it folds anyway, what do you have? That vesting won't be worth anything. And as for the Dolework . . ." She bit her lip and swallowed hard.

"Go ahead," he said.

She looked down at the ground. "I don't want to. I'd just say something I don't really mean."

"Very *Christian* of you," he said. "Extra points in heaven for this little girl."

"Homer, stop it." Her tears were dripping from her face onto her shirt. She did not look up. "I don't want to have a fight."

"Well, maybe I do." He hated the ugly sound of his voice, but Carol had started this whole thing. She had whined until he started shipping out résumés to what few openings there were, and she had built it up in her mind into the thing that would save them from the "shame" of the Dole — a shame that was entirely in her mind, thanks to her parents. "Maybe I want to have a fight," he said, "did you think of that? So why don't you go ahead and say it? The only work I get paid for is the Dole, working on Enoch's crew, and I'm never home because I work two jobs, and Moddy and Abe think they don't have a father. Come on, let's say the whole thing. And you don't see why I have to do this. . . ."

She had turned away, looking down at the sterile white tank room floor.

"Let me tell you something." His hands squeezed each other painfully; he could feel himself trembling. "*This* is my job. This is what I do. I'm growing the critical parts for the first crewed starship here. I'm going to own a great big piece of the Public Services Contract. And if you're about to ask if that means more to me than you or the kids — well, it does."

She was still silent, not moving, sulking as always. The pit of his stomach felt cold and heavy, but he went on. "I thought you got past all of that a long

time ago, but I guess I was wrong. I know your parents taught you that every Dolework fiver has Satan's hoofmarks on it, but I was raised in the twenty-first, and I'll take the Dole or worse to stay here with Deepstar. If you can't stand that, maybe it's time for a nice unChristian divorce."

"Homer," she said, after a long silence, "my mother sent me this note. She's coming out for a visit. I can try to tell her no, but you know she'll probably just turn up anyway."

He turned and left then, not giving her a chance to say anything more, fleeing down the corridor to the Deepstar main entrance and into the crowded malls of Spokane Dome. He hoped they would notice that she was in the tank room without him and give her a hard time.

Not really looking where he was going, he automatically started for home. He realized that Carol would go there too, and wished they could avoid each other longer, but neither of them had anywhere else to be.

His wristcom whined like an angry mosquito. When Homer touched the acknowledge, Enoch Velasquez's face filled the tiny screen. "Heya, Homer. One of my regular Tuesday swamper's down sick. Time and a half if you want it."

"What's my return time?"

"Oh six-thirty is the ET. Could flex a little one way or another. You still get twelve hours at one-point-five pay even if we're back early — and your full time at that rate if we run late."

"Well, I'm tempted, but that's only half an hour before I'm due back on the tank, and I need to be up and green for that."

"Sleep during your out-and-back and catch some catnaps," Enoch urged. "I can't make you take it, and god knows you're entitled to some downtime on your Dolework — you've got a great record — but it's going to be a long haul, and I need a full crew, and a good, reliable one too. All I can say is I'd be grateful."

Enoch had been more than generous in the difficult years after the Moratorium, when Deepstar had stopped paying anything at all and the temp market had virtually shut down. He was a good boss, as generous as a Dole contractor could afford to be.

Unfortunately, as long as the Moratorium was still on, that wasn't particularly generous. When the run on the banks and the stock market had started two years before, the government computer models had shown no bottom — if allowed to run its course, the depression would become permanent. The economy had simply gotten too interlocked to revive in a bootstrap start.

So they had passed the Moratorium; Homer remembered how relieved he had felt when it was announced. You couldn't be laid off or fired, your vesting kept accumulating, and you and your pension fund would continue to accumulate IOU's. Theoretically, some day it would all be paid off.

Meanwhile, to meet the bills, there was Dolework — work for Public

Services Contractors, at minimum wage because the low bid got the contract. As long as you took every offer, it would feed, clothe, and house a family, though not in style. An extra night's Dolework right now might mean a birthday present for Modesty, even dinner out with Carol. . . .

Homer knew what would happen if he stayed home this evening: they would shout at each other until his nerves were shattered and he was guaranteed to be short of sleep for his next stint at the tank. Then they would agree that he would apply for more jobs, that Carol's mother would come for a month, and that he would keep working on Deepstar — for despite Carol's hopes there were really not many jobs anyway, and as long as he stayed with Deepstar, he could at least keep his skills current.

Of course, she'd always have the NLPF offer to throw in his face from now on. "I'll take the job," he said to Enoch.

"Good man! Your pickup's at Berth 631A in twenty-five. See you there then." Enoch clicked off.

631A was on the other side of Spokane Dome, so Homer dropped two dollar coins into a gliderail car, got his change, and keyed in the address. The little car rose and sped down the track. He stared at the dime in his hand for a moment. In better times, they had simply thrown dimes in an old jar; now that jar was all the savings they had.

Ordinarily, he liked to look at the falls in the center of the dome, foaming and thundering below the big green swath of Riverfront Park, but this time he would need all the sleep he could get. With regret, he set the windows to dark and reclined his seat.

At Berth 631A, everyone except Enoch was already waiting by the diskster. Ulysses Hayakawa, a Dolebird by preference who actually liked being a swamper, leaned against the sloping side of the disk where sunlight from one of the windows was hitting it. "Heya, partner."

"Heya, Ulysses." Usually, on Homer's regular Monday and Thursday shifts, they worked together; Homer wanted to get it done and get home, and Ulysses wanted to do it well, which meant quickly.

The two younger members, Cato and Naomi, sat on the deck rolling dice and poring over a copy of *Surfaces in Opposition*. Naomi had converted to Cybertao a few years back — a lot of people had taken up the Stochastic Faith lately — and since Cato was crazy about her, he was studying it. Ulysses had once said that it was a good thing that Naomi had not taken up "gravitic correction," the current fad for hour-long headstands, because if she had, Cato would have caved in his head.

Homer was still hoping this would be a simple fishing run up to Flathead Lake, but he knew it was going to be game — otherwise why such a long trip with such a big crew? And it wasn't any season for fish anyway, and Billings Dome had been less and less willing to sublease Flathead fishing rights to Spokane lately.

Going after animals always bothered him. There was more wildlife of all

kinds in North America than at any time since 1700, and he certainly liked venison and elk as well as anyone else, but he just hated killing things.

Sure enough, when Enoch arrived and let them into the diskster, the inside was stocked with woods suits, light amps, dart guns, and fletch-rifles. Game for sure.

Homer stretched out in a jump bunk aft; harvesting disksters were built for silence and maneuverability, not speed, and they would be running more than 500 km up toward Glacier, a two-hour trip along the old highways. The charged impeller needles popped out and started the ionized airflow over the disk surface, lifting the craft and shoving it forward. The comfortable routine seemed to wipe his worries away; before Spokane Dome had even gone from the rearview screen, he was asleep.

When he woke again, they were about fifteen minutes from their first stop. Naomi was continuing her long-running argument with Enoch; Cato, as usual, was sitting next to her and patting her arm every time it sounded to him as if she'd carried the point.

"But there's nothing spiritual to it," Enoch said. "It's plain common sense that a complex ecology like wilderness produces more biomass and raw protein than a simple ecology like ranches and farms. You get so many more cross-feeds, and there's virtually no waste. That's sophomore college ecology, not the Immanent God."

"Science is how the Immanent God makes himself known to us," Naomi said firmly. Cato touched her arm. She ignored it and continued, "Within sixty years of the Copy Diffusion of Turing, Godel, and von Neumann, the global ecosystem began to roll back to its natural and proper complexity. Could that just be coincidence?"

"No," Enoch said, "that's economics. We finally got cheap, fast information-processing capability to make full use of the natural system without damaging it. The reason for land agriculture wasn't that it produced more food per acre, but that it produced food on predictable acres and simplified your tracking. You always knew where the corn or the cow was. It wasn't till we got cheap satellites and computers that we could harvest wild food at acceptable cost and keep our harvesting from unbalancing the ecosystem."

"Then you admit my point," she said. "We got those things right after the Copy Diffusion of the First Triad — it was purely a coincidence."

Homer knew enough Cybertao doctrine, having gone to a couple of lectures years ago and even read *Forks in Time*, to know that coincidence was supposed to be how the Immanent God consciously evolved toward his upcoming birth. Not only did it all make a certain peculiar sense, it made it almost impossible to argue with a Cybertaoist.

Ulysses grunted awake next to him. "What's she going to do if Enoch ever converts?" he asked.

"Start on us, I guess."

"Go, Enoch."

Homer nodded agreement. Ulysses sat up on the jump bunk and looked at the screen. "Well, that's nice and restful. First call is bison, open country, flat ground. Piece of cake if we don't spook 'em."

"Yeah." They moved cautiously forward to the suit locker; Enoch sometimes took turns suddenly without much warning. Homer passed Ulysses his suit, then pulled his own on. The lightweight covering always made him feel better, as if he were armored against the dirt and bugs of wild country.

A few minutes later, guided by the satellite, they left the old road and crossed three kilometers of open ground toward the target herd. The satellite showed no wolves or humans in the area, so there was little chance of the bison spooking.

The diskster settled without a sound onto the summer-dry ground downwind of the herd. The cabin lights dimmed. Homer flipped on his light amp, setting it for spectral compression so that infrareds would show as red-to-orange and ultraviolet as blue-to-violet.

They emerged from the glowing red cabin to see the herd of bison half a kilom away. The moon glowed bright green in the amp's eyepieces; the deep green grasslands were as quiet as they had been before Columbus.

Enoch's subvoke crackled in their ears. "Ulysses and Homer go right; Naomi, me, and Cato will go left. It's a clear night, so wait for the designator; we want one clean hit on each."

"Brain shots again, boss?" Ulysses asked.

"Yeah. Still nobody wants the thinking part. It says something about modern times. Let's go."

Silently, they closed in on the herd. The bison glowed crimson in the lenses of the amp, oblivious in the warmth and plentiful food of summer — happier, Homer thought, than he was ever likely to be.

They stood in their positions for a long time while Enoch talked to the satellite. Finally, the purple lines of the designator lasers stabbed down from the star-filled sky above, pointing out bison.

"Ready on the right," Ulysses subvoked.

"Go ahead," Enoch responded.

Ulysses shot one immediately, and the purple designator switched off as if it had somehow drawn its power from the living beast. Homer sighted his fletch-rifle, placing the laser spot on the right place on the skull for a clean brain shot, and squeezed the trigger.

The fletch, no bigger than a grain of sand but moving at four km/sec, slammed into the center of the laser spot, penetrating the bison's skull before the binary agents in its structure collapsed together under the impact to form the unstable neurotoxin. In an instant, driven by the force of impact, the deadly stuff had diffused throughout the big animal's brain, and the bison died before it fell. Within less than a minute the toxin would decay to harmlessness, though to be on the safe side the brain would be discarded.

Purple lines from the sky selected two more fat cows and a yearling; Ulysses and Homer brought them down.

As the last one crashed to the ground, something finally alerted the herd, or perhaps it was just time to wander a few hundred meters more upwind. They walked away quickly, not even sniffing at the bodies.

"Tidy little job," Ulysses said. "The way I like them." They walked forward to wrap the monomyl lifting slings around the carcasses.

As he tightened one sling, Homer caught a glimpse of the big, sad eyes of the bison. He hated to admit it to himself, but he was bothered. Getting fish or edible fungus or wild berries was different — even pleasant when the weather was good. This always felt like murder, even though he liked a good bison steak as much as anyone.

They had barely tightened the last sling when Enoch brought the diskster up, extended the crane, and began to load the carcasses into the cryohold. Homer and Ulysses quietly climbed in, leaving their suits on but pushing their light amps up onto their foreheads and carefully racking the fletcher rifles.

In a few minutes, the four bison Cato and Naomi had bagged were also loaded in. "Dressed out, this haul ought to make eight tonnes, maybe ten," Enoch commented.

"Next call tonight, boss?" Ulysses asked.

"Waterfowl," Enoch said. "Hope you feel up to some wading."

It was almost an hour before they reached the old upcountry slough, a place where a beaver pond had silted up and spilled over into the low part of a meadow. The ride was smooth enough, but Homer had trouble getting to sleep. He could not get his mind off Carol.

He didn't know why he was always blowing up at her. In her situation he'd have been much more obnoxious than she ever was. Was it that he could "hear" what *he* would have been thinking? Maybe she didn't think that way at all. After all, she'd grown up in a born-again indocom, thoroughly sheltered, scheduled to become a Homemaker. Maybe, in fact, she didn't even *care* that he was rude, that they lived on Dolework, or that the kids couldn't go to an acadenhanced DC —

Of course she cared. She wasn't a little nit straight out of the indocom. She had run away from home as soon as she was old enough to claim citizen's protection against her parents. And Carol wasn't stupid — no more than she was ugly. He remembered her hugging him, and thought of her right now, sleeping alone in their bed.

Homer was lonely, but it was pleasant somehow. He still could not get to sleep, not even with the help of Enoch and Naomi endlessly bickering about Cybertao. Even Cato fell asleep after a while.

He watched the mountains and trees roll by, and finally drifted off to sleep, but he seemed to wake up almost immediately. Looking at the clock, he saw that he had actually picked up twenty-five minutes of sleep, which

was better than none, anyway.

They were off the road, winding through clearings and along old, half-overgrown logging roads, occasionally skimming a creek or river for a while. It would be nearly daylight before they got to the slough, but the two-meter-tall new pines in the old logging road prevented their going faster.

"This job is going to be impossible in twenty years," Enoch said, "once the old forest grows back."

"Job didn't exist twenty years ago," Homer pointed out. He remembered that when the Youth Orientation Program had taken the refugee children from Labrador Camp on a tour of this part of the country, the level ground had been all wheat, the hills dotted with cattle, and only the distant mountains forested. He had been eleven then; he was thirty-four now, and in that time the grasslands and bison had come back.

At last they set down in a broad meadow. To their east, bands of red streaked the gray wash of the sun rising over the Mission Range.

"Your suits are wadables," Enoch said, "so if you keep the water at your chest or below, you should stay dry. We have dart guns for these guys, with a string trace so you can just pull them in. The ducks are too small for the satellite to designate, so I've set a monitor to let me know when we've fired fifty combined. And when we have, I better see fifty ducks in the bags."

Again, Homer worked the far side with Ulysses. The flock had not yet roused. Over and over, he pointed the heat-seeking dart at the sleeping duck, fired it, reeled in the paralyzed bird, and threw it into his bag.

Homer had twelve and Ulysses seventeen when Naomi slipped on a submerged log and fell backward into half a meter of water. The ducks rose squawking and shot off in all directions.

Cato, short on his bag as always, took a shot at a duck in the air. Feathers exploded from it; with a croaking scream, the duck veered away. It had lost most of a leg, but the dart had not penetrated the body to inject its paralytic venom. They heard it crash into the water somewhere out of sight.

"Nice job," Enoch said. "Real nice job. We needed four more ducks for our total bag, and this had to happen."

"Got a wounded one, boss," Homer said. "I better go after him."

"Shit." Enoch spat on the water in disgust. "We'll still be three short."

"Sorry, boss," Naomi said quietly.

"These things happen." Enoch sounded as if he would like to kill her. "It's not really anyone's fault." He sat down on a rock; faintly, they could hear him checking with the satellite controllers. "No other flock nearby we're authorized to touch. Looks like that's a day."

"We really should go in and get that duck, boss," Homer said. "It'll bleed to death or die of shock."

"Yeah." Enoch grunted unhappily. He glared at Homer, who finally realized that all this was going onto audio record for Public Services review, and the rules forbade leaving wounded game to die. If he had not mentioned it —

well, it was water under the bridge, and the poor thing *was* hurt. "Yeah. Why don't *you* go get it, then, Homer? The rest of us will wait here."

Homer ignored Enoch's tone. "Sure." He turned, lurching and crashing through the thick cattails in the direction the duck had gone, quietly switching off his transmitter to leave himself free to mutter.

"I'll go with you," Ulysses said, following him.

A hundred meters farther along the pond shoreline, blood floated on the water. "Poor thing," Ulysses said, clicking off his own transmitter. "And Enoch was just going to leave it to die."

"Yeah." Homer knelt to look at the floating clump of blood. "Does this tell you anything?"

"Do I look like the Old Indian Guide? For all I know it contains his fax address and contact code if you read it right."

Homer snorted agreement. They kept working slowly around the outside of the slough. Finally, half an hour later, they found it floating in the middle of a deep pool, its head underwater, surrounded by floating blobs of blood. By now the sun was fully up over the Missions, and the first lazy flies were circling the dead duck. "Might as well go and get it," Homer said, and waded out.

He was swimming before he had gone two meters, unable to keep the neckline of his suit above water. He dragged the soggy bird back with him, the cold water oozing over his chest into his crotch and down his legs. The suit "breathed," so the water would squeeze out or evaporate sooner or later, but meanwhile it was cold misery against his skin.

"Let's go," he said, stuffing the bird into his bag. He flipped to mic and called Enoch. "Boss, we got him. If you've got a fix, we'd appreciate a ride."

"You got it, ETA five," Enoch replied, and clicked off. He didn't sound angry anymore; one of the things that made him a good boss was that he couldn't stay angry.

"Well," Ulysses said, "that made it a little more interesting, but I still feel sorry for the duck."

"Me too." Homer did some knee bends experimentally, hoping to either work the water out or warm it up. "At least he went pretty quickly. Would have been worse to find him thrashing around and hard to get a shot at."

"Yeah." Ulysses stretched and yawned. "Say, Homer, you've been pretty quiet this trip."

Ulysses Hayakawa was as much of a friend as he had anymore; it would really feel good to unload the whole mess on a sympathetic shoulder . . . but could he trust himself to be fair to Carol? "Well, things haven't been so good at Deepstar. The UN's not so sure it wants to go ahead with a Public Services Contract on a crewed starship. So they might let it lapse with a one-time payment. Uh, that should stay under your hat."

"Sure." Ulysses turned to look at the sun rising red over the Missions. "Storm for sure before noon out here. Glad we're going to be back in the

Dome — though we might run into it coming in. Hell of a night, wasn't it?" He yawned and stretched. "I love this job. I even take my three weeks Free Dole every year hiking and camping up here. I can't imagine what it would be like to have to worry about getting the work I want."

"It's not easy," Homer said.

The diskster came up to them, floating half a meter off the water, air whispering over it. The smell of ozone from the impellers cut through the wet early morning air like a driven nail. The big craft glided slowly past them and settled onto the meadow in a soft sigh of crushed grass. The front hatch slid open, and Ulysses and Homer climbed in, slinging their bags into the chute to the cryohold.

He had planned to sleep on the way back, but could not. Naomi had recovered from her drenching enough to argue with Enoch again, which reminded him that he was angry with her, so the normal squabbling was louder and more shrill than usual. Further, the water that had gotten into Homer's woods suit had soaked his clothes so that they now clung to him in an icy hug.

To pass the time, he mentally wrote letters to Carol. In the first years they had been married, they had often left notes for each other after a fight — somehow it was easier to write apologies than to speak them. Once, after Carol's parents had visited, Homer and Carol had traded letters four times before they could speak to each other again, even though they were sleeping in the same bed. They hadn't written notes like that in the last few years, but maybe he would today.

He curled tighter on the jump bunk, trying to tuck up small enough to stay warm. The extra half-hour retrieving the duck had virtually shot his time margin; he would not be able to start the premix as early as he usually did. It would be an hour into shift before he could begin injecting the bacteria and starting to grow metal, and in these delicate last stages, he would be lucky to pick up one percentage point toward completion today.

Of course, as long as they didn't actually put the piece in or inject the bacteria, anybody could handle the premix. He fingered his com, trying to think of who he could ask to start premix for him.

Deepstar Corporation itself was down to three execs, all working for vestment alone. There were fewer than thirty workers left on the whole project, and he knew none of them well. Everyone else in his department had left; there was really no one he could call.

Unless Carol —

There was no mirror but he made a face at himself anyway. Carol was certainly not going to hand Moddy and Abe over to DC an hour early and then run over to Deepstar to start the tank for him. And being honest with himself, he had to say it served him right. He would have to wait and just take the time penalty.

He wished he could talk to Carol; he began to imagine writing the letter

again. He tried to invent good excuses she might accept, but none of them was close to the truth. It wasn't just that *Deepstar* would be a name in history, like *Santa Maria*, *Half Moon*, *Discover*, *Apollo 11*, or *Justice 9*. No one remembered who built those either.

And it wasn't the challenge of a difficult, intricate job. From a pure technical standpoint this project was actually pretty easy. He had gotten fussy about staying totally clean-and-green mostly as a way to stay awake.

He watched the riverbank roll by. Enoch had decided to bring them down the Clark Fork instead of along old 90; they would probably rejoin the highway somewhere around where the Blackfoot came in.

Well, start a new "letter" . . . he couldn't sleep anyway. He might actually be getting a little warmer and drier.

He felt no particular dedication to his children or grandchildren. If *Deepstar* left on schedule, by the time it finished its trip through eight Sol-similar systems, his youngest possible grandchild would be ninety years old. Homer had no desire to go. Within a few years message lag would stretch communication to collapse — anyone who left on such a voyage was as good as dead to the people he left behind.

He just wished Carol could see it his way. *Deepstar* was *his*. When his parents had fled Europe in the wake of the Unification War, they had lost everything. As a child in Labrador Camp, he had not even owned his shoes or shirt — both were UNRRA property, hand-me-downs destined for more handing down. Now he owned his furniture, his clothes — and his vesting in *Deepstar*. Something he could pass on to Abe and Moddy, something that could not be taken from him — made worthless, but not taken away.

Why was something so simple so hard to say to her? Since the Panic of '34 and the Moratorium that followed, new jobs with vesting had been nearly nonexistent. There were straight-wage jobs, and of course there was always Dolework, but a real job, one where you could come to own part of it, get real voting power — those were gone. If he left *Deepstar*, abandoning his accumulated vesting before he had enough service to make it permanent, he was back to start, owning just some clothing and furniture.

And although just now it was only the Moratorium that forced *Deepstar* to keep its employees on at all, and kept the creditors from seizing the corporate assets, owning a piece of humanity's first starship at least looked like it had some potential. This was the equivalent of owning Wright stock in 1902 —

He knew what she would say. Plenty of people had tried and failed to build an airplane, and their stock would have been worth nothing.

The diskster banked sharply, climbing up over the riverbank and running across a grassy field to old 90, just before Missoula Ruin. They were now only a little over three hundred kiloms from home, and he still hadn't gotten any sleep. The diskster settled into high level flight a meter above the old road.

The screens showed the mountains in the distance; ordinarily, Homer enjoyed these early morning trips. Eagles soared on thermals above the abandoned towns, and bears fed on the wild berries in the old ditches. Once, just as they crossed Fourth of July Pass, he had seen a bighorn sheep calmly staring at the passing diskster from the top of an old ramp.

Now, however, he just wanted to get back to sleep, to be functional during his tank shift.

"You awake?" Ulysses asked.

"Yeah. Can't sleep."

"Me either. Too excited. That finding the duck was about as close to real hunting as I've ever gotten. I felt sorry for the poor bird, but still — ever done real fishing? With a rod and line and everything?"

"No."

"There's nothing like it. No satellite to tell you what to do, no designator to tell you what to hit. You're out there on your own, just you and the woods." Ulysses sighed. "I don't think they'll ever license private hunting again — private hunters would screw things up too much too often for the harvest. But still . . ."

Homer grunted. "I'm afraid I'm a pure city kid. I'd rather they just domed North America and fed us all on battery potatoes —"

Both of them knew that Homer didn't really feel that way, but they enjoyed the argument. Actually, last year Homer had brought Carol and the kids out to the resort dome on Flathead during their Free Dole, and they'd all had a great time hiking in the hills and trying to master the old-fashioned sailboats. That had been a good time. It seemed long ago.

The argument with Ulysses fizzled without ever really starting. Homer dozed a little then, finally. He woke up, still tired, as the top edge of Spokane Dome came into sight across Lake Coeur d'Alene. Within minutes the diskster grounded in its berth. "Looks like we beat the storm by a good hour, anyway, so we did something right," Enoch said. "At least most of us stayed dry."

Homer grinned a little, said good-bye, and caught a gliderail car for home. He still didn't know what he would say to Carol.

She was gone. A note said only that the kids were at DC. He checked the clock: he was already beginning to run late on his shift at Deepstar. Still, he couldn't quite go yet, somehow . . .

He looked around again. Modesty's favorite pajamas were wadded into a ball by the kids' room door, as if she had been dressed in haste; Abe had gone to DC without Glump, his stuffed tiger. An empty glass lay on its side on the kitchen table.

He checked the wastebasket. There were several wadded pieces of paper.

Homer pulled them out and smoothed them. All of them began "Dear Homer" — two went on no further. Another followed up with "I'm angry" before being wadded; one added "You Europig Dolebird, they should have

sent you back." A last one, torn in three pieces, read "I love you, but I just can't stand this anymore, so I'm going to" and then trailed off in a dozen completely illegible cross-outs.

What had she decided to do and then decided not to tell him about?

He imagined her at the table that morning. Abe and Moddy would have been wolfing breakfast, spilling everywhere (splashes of milk and oatmeal at Abe's place, not mopped up — another strangeness), shouting, "Guess what!" Carol would be bent over the note, trying to force it out — the letters looked as if they had been slashed and burned into the page — half-blind with tears, mumbling, furious, trying not to shout at the kids. Then she had decided something.

If she had any sense, it was to get rid of Homer.

He sat down, breathing hard. He wanted to find her and apologize right now. He wanted to just sit there and feel sorry for himself.

The comlog. If she had called on the house terminal and not on her wrist-com, then —

She had. His clumsy fingers stubbing on the keys, he called up the record. After putting the kids into the glidecar to the DC, she had dialed up a car to take her from here to Deepstar.

He stared at it, baffled. Then he knew.

Grown metal is delicate stuff, woven to the precise shape of an atom-by-atom spec. She need not know anything more than what she had picked up from him. If she were just to lower the partly grown piece into the tank and dump in all the salts, metabolites, and bacteria together, in half an hour the smooth perfection would be irrecoverably buried in a formless lump of metal. Weeks of work gone, now, when the Deepstar Project was in danger already.

Especially if she also threw in the finished parts still sitting on the racks. A year's work and more . . . and she was in the tank room with it right now.

Carol could kill Deepstar. She had every reason to want to, and she would *know* that she could do it, if she gave it even half a moment's thought. She wasn't stupid, after all.

He had to redial twice for the glidecar because his hands were shaking. He splurged on an Express Priority — his car would take precedence over all but emergency traffic.

The glidecar was standing in front of the apartment when he opened his door. He pushed the close button behind him, jumped into the car, and hit the destination confirm. The car lifted and shot into the express lane, swinging through service tunnels to take short cuts authorized by his priority. Pipes and cables flashed by him, then express lanes, then more service tunnels —

In less than three minutes, the car slid to a gentle stop and settled to the track in front of the Deepstar complex entrance. He jumped out, slapped the dismiss on the outside of the car, and ran inside.

The tank room corridor entrance was three hundred meters down the main tunnel within Deepstar. He ran as hard as he could, the guard gaping at him but — thankfully — not stopping him. Of course he wouldn't have stopped Carol either. . . .

Homer ran as hard as he could, his breath knifing in and out and the blood pounding in his head.

The telltale light at the entry to the tank room corridor was flashing red — someone was in there, and the tank was active.

He stopped a moment, hands braced against the wall. He had to quiet his panting. It was thirty meters down the corridor to the tank room. The ping would tell her he was coming, but if he got there fast enough, he could catch her in the act.

Kids or no, he would testify. She would go to a labor brigade for years to work this off.

His breath was back. He checked his pulse. It was racing, but it didn't feel like it would slow any time soon. On his toes, he dashed down the corridor, holding his breath, trying to make no sound, almost falling into the room as he came to the door.

Carol was sitting in the observer's chair. Automatically, he glanced at the boards. They glowed impossible steady green — they were only that steady when —

"Did you get hung up out there?" she asked. "Your clothes are wet —"

"You did the premix," he said, staring at the board. "The tank's ready to go."

"It's not that hard," she said. "I just selected default preset for today's date. I hope that was right."

"Yeah. It sure was." His knees trembled and his tongue seemed to swell, making it impossible to breathe. "Why did you — I mean —?"

"It matters to you a lot, I guess. Maybe I just wanted to see what you'd do. Anyway, I checked the registration and found out you were delayed, and it was my day off from Dolework."

His eyes stung. He walked slowly to her, his legs still numb and clumsy, and held her.

"Was it real bad?" she asked. "Did they make you kill animals again?"

"A duck got wounded and I had to go after it," he explained lamely. He let go of her and sat down. "I'm really tired, I have a lot of sick time — I won't lose a day's vesting if I make this just a half-day. . . ."

He felt like a fool. He thought of how she must have hurried to get here. "So take a seat," he said. "It'll help my concentration to talk through this, and afterward we'll go get the kids and maybe spend the afternoon at Riverfront."

He explained deposition rates and maximally probable lattice surfaces and metabolites and inhibitors. He showed her all the fluxes and tricks of the graphics, letting the bands rise into red and fall into yellow for empha-


sis. "It's sloppy but well within tolerance," he apologized.

Carol said little; Homer's voice got hoarse, but he kept explaining, as if, when he stopped, she would quietly vanish forever. He surprised himself by getting eight tenths of a percentage point in three hours.

"That's really good," she said.

He let the grapples lift the exhaust nozzle from the tank and return it to the deionized wash. He could feel nothing inside anymore. "I could go home and call NLPF," he said finally, as he shut the last of the boards down.

"There's no vesting and no security. They could fire you after two weeks. Better to stay here and protect what you've got."

Although he took her in his arms to keep her from seeing the tears on his face, she pushed his head back gently and saw them anyway. And he saw hers. 

THE LITERARY CAREER OF JOHN BARNES

Current Directions . . .

How I Happened To Write "Delicate Stuff"

When people ask how long it took to write a story, I always say, "All my life." It's always true, but it's cheating. Some reasons "Delicate Stuff" came out the way it did:

I'm basically an extrapolator — I like to plot social trends, curves, and cycles forward. Though I try to stay up with advancing technology, what I really get off on is social and economic computer modeling. The results are still pure fiction — I can't foretell the future any more than anyone else can — but at least my futures fit the same patterns that the real one is likely to fit.

When I was a kid, I read SF, but I thought it was something you gave up with puberty — the first SF book that didn't seem childish to me was Heinlein's *The Green Hills of Earth*, which I read in fifth grade. The stories in that book are still sort of magical to me.

In the spring of 1987 I was bored sick of novel writing; I knew I'd have to take some kind of summer job, anyway. Working on a double Masters, I was behind on one thesis and hadn't started the other. It was on the whole a bad time to start a novel.

I decided to try a bunch of short stories set in a common future, one that diverges from our own no later than 1992 and runs to 2100. I usually hate series — I always thought going somewhere new was the *point* of SF — so to buy off my conscience, I imposed some rules on myself:

- All characters are ordinary people — no generals, presidents, brilliant scientists, or rich people.
- No characters occur in more than one story.
- The story revolves around what its protagonist does for a living, and its

interaction with his or her major emotional involvements with people, ideas, or self.

- One story each in 2012, '24, '30, '36, '42, '48, '54, '60, '66, '72, '84, and '96, for symmetry.

I was taking an acting class in personal performance — how to amuse people by telling stories about your own life — taught by Randy Bolton at the University of Montana. One of his assignments was to do something in a shorter or longer time than ever before, and perform the story of how we did it. I decided to try to write a short story in one day — so at 6:15 A.M., I sat down, picked 2036 for no reason I can recall, named a character “Homer Bizet,” gave him a job and a wife and a problem, and started writing longhand in a steno notebook.

At 2:00 A.M. — 1.5 gallons of coffee and 5,000 calories later — I had a rough draft of “Delicate Stuff.” Three re-writes later, I sent it to Mr. Price, and he bought it.

Bolton gave me an A for my performance, too.

... and Past Achievements

Novels:

The Man Who Pulled down the Sky. Congdon and Weed, 1987.

Sin of Origin. Congdon and Weed, 1988.

Short Fiction:

“Manuel’s Tears,” novelette. *CoEvolution Quarterly*: Fall 1982.

“Finalities Besides the Grave,” short story. *Amazing Stories*: September 1985.

“2E6,” novelette. *Analog*: March 1986.

“How Cold She Is, and Dumb,” novelette. *The Magazine of Fantasy & Science Fiction*: June 1986.

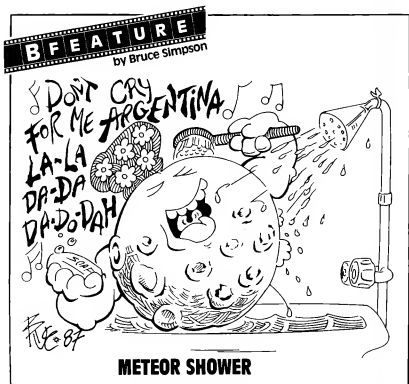
“Stochasm,” short story. *Isaac Asimov’s Science Fiction Magazine*: December 1986.

“Digressions from Second Person Future,” short story. *Isaac Asimov’s Science Fiction Magazine*: January 1987.

One-Act Plays:

Sometimes Latin Class Gets out of Hand, reading by the Anbahar Players at the Third Street Studio. Missoula MT, May 1985.

Eye Heart Shoes, reading in the New Words in Action Playwriting Festival. Missoula MT, June 1986.



CENTAURUS DREAM

Weaving orbits in Centaurus
Beats a wild world waiting for us
Riding only four ly distant from the world which gave us birth.
While Alpha C shines lightly
In the heavens daily, nightly,
This triply sunlit planet is compatible with Earth.

With the solar winds thrice solar,
Equatorial plus polar
Tilted axes in precession, orbiting in twisted eights,
Eyes from Earth have never seen
Such coruscating spectral sheen
Of auroral iridescence spanning twin magnetic gates.

While seasons pass in random phase,
With endless shades of nights and days
When Alpha A is rising and B begins to set,
With global storms and tidal bores
Reconfiguring the shores,
Has natural selection reached a sentient level yet?

En route sublight, the great unknown
Is answered: *we are not alone*
When signals mixed with noise announce: intelligence ahead.
As our starship's orbiting their skies,
How hostile watch their alien eyes?
Then jets appear, but not to strike, to guide us in instead.

We're greeted, feted, heroes all,
As barriers of language fall.
These Indar humans mirror us, in science they're our peers.
But after all the cheers die down
In six Earth months, we're leaving town —
So maybe we are still alone, with round trips sixteen years.

But Indar physicists invite
Our own, to stay and add our light
Into the darkness that surrounds some hints of unknown powers.
Titled "Project Stardrive" — aimed to breach
The light years now beyond our reach
And bring us living to the day the galaxy is ours.

— Mike Curry

THE RIVER OF AIR, THE OCEAN OF SKY

by Geoffrey A. Landis
art: George Barr

Geoffrey A. Landis probably has a Ph.D. in experimental physics. He is rumored to know a lot about solar cells, and he has helped build and fly several human-powered aircraft. After his first story, "Elemental" (Analog, December 1984), made the final ballot for the 1984 Hugo for best novella, he decided to attend the Clarion Writers' Workshop and learn how to write. He is not currently working on a novel.

Love came to him only late in life. It came not as a sudden shock, but growing so gradually he could scarce recall when it began, or how it had ever been that he had not loved.

Overlooking the ocean from halfway up the rocky bluff, the salt breeze cool on his face, he watches his son play in the sea. His son waits until a wave passes, then quickly rushes in to pick up shells before the next wave washes in to cover them over again. "Eki!" he shouts, and his son looks up. "Eki! Take care you do not go too far out, or the waves may wash you out to sea!"

"Yes, Daddy." Eki's voice is faint from distance. He had no real need to warn the child; he just wanted to hear the sound of Eki's voice. The tide is incoming, and like all the children of Krete, Eki can swim almost better than he can walk.

Over his head, sea gulls ride the breezes, free of the tyranny of gravity. On the horizon, the galleys of the conqueror king forever patrol the seas.

Even coming off the boat, a murderer, sold as a slave tribute to the conqueror king, still he had pride. Brazen shackles chafing on his feet, he watched through the tiny porthole in silence as the boat entered the harbor of Knossos. The city had no walls, he saw with surprise. The cities of the sea conquerors had no fear of invasion. At the dock the slaves were herded roughly off the boat. When the boat rocked they stumbled, unused to walking after two days packed in the hold of the ship. The crack of the overseer's whip above their heads kept them moving.

The dock smelled of old fish. He looked about eagerly, greedy for a sight of the fabled land of ninety cities, a country of mythic richness to the Achaeans. The slaves were met by the conqueror king himself — although Daedalos knew that the king was probably less interested in the slaves than in the cargo, the owl totem of Athens that symbolized his sovereignty over the people of the Owl. Of the other slaves, some lowered their eyes respectfully, knowing themselves in the presence of the most powerful man in the world.

Others cowered in terror, believing they were to be fed to some horrible monster. Only he looked directly on. He would lower his eyes for none. He was Daedalos, and more than equal to any man on earth.

The king walked to the end of the dock and looked over the slaves. The king was short, with long curly black hair and eyes of even deeper black. In the Cretan style, he wore no shirt. Wiry muscles showed beneath skin burned by the sun to a deep reddish shade of brown. Was this Minos, conqueror of the ocean? Why, he's barely older than I am, thought Daedalos. He laughed then, and Minos stopped in front of him, looking him up and down.

"Do you think it prudent, man, to be in shackles yet laugh at a king? Who are you, to have such a sense of humor?"

He stood proud. "I am Daedalos."

"Daedalos." The king mulled this over. "Not Daedalos the artist, the master craftsman of the Achaeans?"

"There is but one Daedalos, and that is I."

"How is it, then, that the famed Daedalos is a slave? Have the owl people so tired of your work that they sell you into slavery to be rid of it?"

"I am accused of killing a man."

"Indeed," said the king. "Is it true?"

Softly. "Yes."

The king laughed. "I think the Achaeans, conquered though they be, still mock me. I required of them a hostage of royal blood to insure their loyalty, and they send me a slave. No matter. They have fulfilled the letter of the command, and they will find that my galleys still patrol the seas.

"You will soon find, Daedalos, that Knossos is not Athens, and we care little about what deeds a man may have done across the sea. Only what you do here matters. Will you work for me, artisan? Will you make for me things of beauty, craft tools of cunning and artifice, as you once did for the barbarians?"

"No."

"A quick answer. Is there a reason for it, may I inquire?"

"I work for no man as a slave."

"You are proud, young Daedalos. If you are indeed Daedalos. It is easy enough to make such a claim. Can you prove it to me? I think not."

"Test me, then. Set me a task that none other could solve."

"Hmm." Minos looked about for a moment in silence, then walked to the beach to pick up a spiraled seashell. He handed it to Daedalos, then neatly pulled a thread of linen loose from the hem of his skirt. "Demonstrate your cleverness by threading this string through the shell." He pulled his short bronze sword from its sheath and laid it across his knees. The implication was clear.

Suddenly, Daedalos was aware of the silence, and the myriad watching eyes. He looked at the shell, barely bigger than his thumb. There was a hole



The River of Air, the Ocean of Sky 33

at the top, where the thread could come out. It was small, too small to allow in a weight to pull the thread around the spiral. He looked around, thinking. There, hanging from a gossamer thread off the dock, a spider. He had watched spiders before, watched them weave their sticky labyrinths to trap unwary flies. The thread from which the spider weaves her net is sticky, but the thread from which she hangs is not.

In the smallest of observations comes redemption. He scrutinized the ground and found an ant. He detached the spider from her line and, with a tiny piece of gum from the nearby web, attached the spider line to the ant. Then he lowered the ant into the hole in the shell.

Much later, the ant emerged, pulling the spider thread. He quickly tied the spider line onto the end of the linen thread, and gently pulled it through. The deed was done. With a bow, he presented it to Minos. The king took it as if it were a great gift.

"Your ingenuity is indeed no legend. From this moment forth you are a free man." The king sheathed his sword and turned to one of his servants. "Remove his shackles."

As the heavy bronze shackles were being taken off, Minos asked again, "Will you work for me?"

"Yes."

"Good." The king spoke again to his servant. "Take all their shackles off." He turned back to Daedalos. "In my land, no slaves wear shackles."

Daedalos spoke sharply. "Then do you mock me, king? Am I yet a slave?"

"We are all slaves, Daedalos," said the king gently, "for there are powers beyond us that even kings cannot control. But other than those powers of wind and earth and sea, you are free."

Powers of wind and earth and sea. But must a man always be a slave to these powers?

Daedalos would always remember Knossos as he first saw it. The city was still celebrating its recent victory. They slowly made their way through the chaos of the crowd, Minos talking all the while, pointing out occasional sights to Daedalos. Saturating the air were the sounds of music and laughter, the smells of a hundred perfumes, a thousand strange foods. Children ran naked down the wide streets, laughing and screaming. Colorful banners wrapped tall buildings of marble and painted wood — buildings taller by far than any in Athens, with bright pennants streaming in the breeze and wood pillars tapered backward so that the bases were narrower than the tops. The women, like the men, were bare chested, nipples colored with belladonna or carmine or indigo. Priestesses in elaborate and fantastic costumes led processions of musicians and dancers down the wide streets, all dancing in convoluted steps and whirling double-headed axes with intricate and dangerous motions. White bulls, feared by none, wandered the streets, their necks decked with flowers, some with large balls decorating the tips of their horns.

On the sides of the roads, pairs of celebrants laughed and copulated, ignored by the others. Daedalos had never seen anything like it.

Ekaros constructs sand labyrinths on the beach, while above him Daedalos sits on the bluff, thinking, watching the sea birds, listening to their mocking calls. He wears no shirt; he has been so long in Krete that he has adopted many of its ways. His skin is now burned so dark that, save for his beard, it would be hard to say that he is not himself a Cretan. But, though it has been nineteen years, still he misses his homeland. There is a new king in Athens, and criminals have been pardoned. He could go back now, were he not a prisoner on the island.

And always there are the seabirds, forever wheeling over the ocean, dipping down and then soaring up again on the cool breeze.

Soon the extraordinary became ordinary. He grew accustomed to the glories of Knossos and began a period of creativity such as he had never known. Ideas flowed through his head faster than he could possibly write, faster than he could speak, like water flowing over a cliff, to splash uselessly at the base.

- couldn't the power of water be somehow harnessed to do useful work?
- but why, since there are always plenty of slaves?
- yet is it right that men should do the toil that could be done by ignorant water? Men were made to use their minds, not labor like animals.
- but men do not use their minds. They are slow, stupid, lazy.

For Minos he designed buildings of unprecedented beauty, and carved statues for the palace courtyard, statues so realistic that unknowing visitors often took them for real people. He constructed puppets for the children, built machines for counting, devised new plumbing systems, and still had time to walk in the sacred groves with the king. He examined the ships in Minos' navy and designed new ships to be faster, carry more, and sail closer into the wind.

At the request of the royal astrologer, he stared into the heavens, devising new systems of calculating the holy days of the sun's death and resurrection.

It was a time of peace and prosperity. Minos' fleet had destroyed the pirate kings of the middle ocean, and the bright-painted trading galleys of the ninety cities sailed to ports as far away as sun-drenched Khem, with its crocodile-headed gods; and even farther, west to the half-mythical isles of tin, the islands which lie just past the edge of the world. Even the Achaeans shared in the prosperity, although Minos had decreed that the owl-eyed ships of the vanquished pirate-state may sail with no more crew than five. And all through the land of ninety cities, Daedalos was known and esteemed, Minos' legendary craftsman. Slowly, he began to forget that he had ever been a prince of Athens, until it seemed to have been almost something from a previous life, distant as a half-forgotten dream.

For Daedalos, the island is a paradise. He has never needed other people for companionship, and being alone on the island with his son is as close to perfect happiness as he has ever known. The boy, too, enjoys it, running and scampering over the rocks and exploring the woods, hunting small animals (unsuccessfully as yet, Daedalos' snares having so far provided their dinner) with a small bow Daedalos had made him.

Boys that age are pliant; soon he will forget civilization. Daedalos knows that it is time for him to be brought to Athens to be educated.

It is past midsummer. The island will be less of a paradise when winter arrives.

Eki runs up to him and jumps in his arms. "Daddy?"

"Yes, little one?"

"Why is it that birds can fly, and we can't?"

Another one of Ekaros' innumerable questions. Why is the sky blue? What holds the sun up? Where does the wind come from? "That's simple, my littler tiger. Birds have wings that carry them across the air, and we do not. So they can fly, and we must walk."

"Oh." Ekaros put his fingers in his mouth and thought about this for a while. "So if we had wings, could we fly, too?"

"Yes, Eki, I should think so."

Naucrate was a gift from Minos. She was not one of the narrow-waisted girls that the Cretans thought so elegant, but beautiful in the Achaean tradition, with smaller breasts and a fine rounded belly.

She lay beside him, stroking her fingers lightly through the hair on his chest, rubbing warm oil onto his chest, nipples, belly. "Do you love me, Daedalos?"

He stayed silent, and she answered her own question.

"No. Of course not. You love nobody but yourself. Daedalos, Daedalos, what am I to do? Is your heart no warmer than the marble you carve? How is it that a man can create so much beauty and yet have no heart?"

If she bothered him, he could send her back to Minos, but he paid little attention to what she said. She was still only a slave girl, for all that she had been in his service for three years.

She sighed, resting her head against his breast, while her skillful hands continued their work, setting him astir. In her own way, she, too, was a master of her craft. He pushed her onto her back and spread her legs. As he entered her, he noticed with surprise that she was softly crying.

Ekaros watches as his father constructs models of birds, built of sticks and wax and linen. Before dawn, when the wind is still, his father tosses them off the cliff, to watch them spiral down into the ocean below.

Minos controls the sea and the land, but he does not control the sky.

His models become cruder, simpler, barely more than a pair of wings and a weight, the wings like sails turned sideways. Finally, Daedalos makes one that glides, and watches it sail majestically off the ridge to splash into the water far out at sea. Now he begins to refine the model, learning what made it different from the others.

And still he watches the gulls.

Daedalos, overseer for the king, watched as the dock workers unloaded the ship carrying the latest royal hostage from Athens and the second tribute of slaves for Minos. A tribute of fourteen slaves was not so steep a burden on the Achaeans, but yet they complained. He could see that the slaves were terrified. Perhaps the same story, that the tribute was to be a human sacrifice to a bull-headed god, had been told to them as had been, nine years ago, told to him. He had laughed at the others' credulity, then, and finally the others had laughed with him. But perhaps these believed.

As the Achaeans forgot the humiliation of conquest and became accustomed to their role as a tributary state, the position of hostage to Minos had become little more than that of ambassador to the court, a role that even had its measure of prestige, sought-after by the many princes maneuvering for the owl-crown of King Aegus. Each one in turn petitioned Minos for the return of the sacred owl of Athens; the prince who succeeded in returning the totem from Minos would almost certainly be chosen king when Aegus died. Each was in turn denied. Although Minos had no desire to rule over foreign lands, he feared that return of the totem might result in a resurgence of Achaean piracy, such as had killed his son long ago.

Things had certainly changed. Nine years in the palace of Knossos. Did it seem like so long? Daedalos was as established a citizen as any of the subjects of the conqueror king. Yesterday, the priestesses had taken Naucraste off to the grove of the goddess to bear his child. Minos had sent him another slave girl to share his bed, but in some vague way, he missed her company.

The slavemaster herded the new slaves up the hill to the palace, where they would make their obeisance to the priest of the bull.

"Daedalos." He turned. A woman stood behind him, holding a sleeping child wrapped in white linen. She nodded down at it. "Your son."

"But where is my concubine? Is she. . . ?"

The woman nodded silently up the hill. There she stood, wearing a full white dress, flanked by two priestesses. Her hair was unbound, her nipples were swollen and red. He moved toward her, but the priestesses waved him back. "Naucraste!"

"I have borne you a son, Daedalos. Do you like him?"

He looked down at the tiny mass. "Of course. He is mine."

"I'm glad. May you have much joy of him." She turned to go.

"Wait! Where are you going?"

"My duty is done. As is my right, I have elected to remain in the sacred

grove and become an initiate of the goddess."

"But —" He had a thousand questions. Why? She waited, patiently. At last he just shrugged his shoulders. "Then go."

"I hope that someday you will find what you seek. Good-bye, Daedalos."

What did she mean by that? The bundle in his arms began to cry. He looked down on it and smiled. "I shall call you Ekaros," he said.

Reluctantly, he gives up the idea that he can make wings so cunningly contrived that a man could fly by flapping them. Such wings could not be made from the scanty materials available on the island, and the strength to flap them would be too much for any but a hero or a god.

But the birds do not always flap their wings. Sometimes they rest, riding the wind currents with motionless wings, and yet do not fall. Why? How?

Four youths just approaching manhood, each one holding a rope, led the bull into the sea. The bull was a wild one, captured that fall in the wilderland of the south, and not used to being led, especially not to being led into the ocean. The bull braced its legs and tried to pull back, bellowing and snorting, swinging horns back and forth in spasmodic jerks, trying in vain to hook one of its captors. His horns were free, and deadly sharp. Behind it, four young girls beat it forward with bundles of sticks. It twisted its head to gore them, but the ropes gave it not quite enough freedom to turn around. Deeper and deeper into the water it went, knee-deep, chest-deep.

The maidens returned, dripping, to shore. In full ceremonial costume, King Minos walked into the water, holding in both hands the double-bladed axe. When he reached the bull, he turned to face the beach, raising the axe over his head. "I am Minos, beloved son of Poseidon, king of Knossos, protector of the ninety cities, lord of the middle ocean, regent of the Achaean islands, consort of the goddess and high priest of the bull-god. Who challenges my power?"

There was silence, and then the bull bellowed, tugging at its ropes.

He turned back to face the bull. The four holders dropped the ropes, and the bull was free.

For a moment they stood there, man and bull. It was not quite a fair contest. The bull's movements were slowed down by the water, and thick bands of gold were wrapped around the bull's feet, encumbering it further, making it clumsy as well as frightened. Still, the sacrifice is never entirely free of danger. Wild bulls are never quite predictable, and always dangerous. Kings have died this way before.

But Minos had been a bull-dancer in his youth. His actions were swift and sure. As the bull lowered its head and began to roar, he distracted its attention with one hand, then, with a single flashing stroke of the ceremonial axe, cut its throat. The bull shook its head, trying to bellow, spattering blood across the waves, across Minos. He stepped back and lifted the bloody

bronze axe up over his head. The bull fell to its knees. On the beach, the crowd roared.

The breakers rolled in, foam pink with blood.

That evening, music played while the sacrificed bull slowly roasted in the bonfire. The upward-pointing horns of the reborn moon, rising out of the blood of the dying sun, were the horns of the sacrificial bull transported into the sky. Sparks from the bonfire flew up and rose glistening into the luminous sky while dancers leaped and tumbled across the white bull of Knossos to demonstrate their grace and courage. A tame bull, this one, quite used to the dancers. A bull trained at such expense would never be used for sacrifice.

The next morning Minos, reborn in the waves, set out on the ritual tour of the ninety cities. At each city a virgin would be waiting, that her blood and his seed would bring fertility to the land and to the people.

After Minos left, queen Pasiphae called Daedalos to her chambers. Her skin was pale, untouched by the sun. The queen lived sequestered in the inner palace, attended only by the women of the court. While her handmaidens waited, in sight but out of earshot, she explained her desire. He almost laughed on hearing it, until he saw that she was serious. It was not what he expected. No, he told her, but already he was considering her plan. It would take a master craftsman indeed. Could he fool them, all of them? Indeed, he could. And in the end, with many misgivings, he agreed to help her.

The backbone — what he thinks of as a keel, having built so many ships — must be curved upward, not down, or it will not glide. The weight must be below the wings.

To carry the weight of a man, the wings will have to be almost four arm-spans across. Can he find straight pieces of wood large enough, and strong enough? Wings for Eki will be smaller.

Minos held the double-headed axe, the axe of the rising and setting moon, in both hands. Daedalos refused to bow. What he had done was done. He would not beg for his life.

"I recognize the craftsman by his work, Daedalos," the king said. "Only you could have given the queen the help she needed to dishonor me. I thought you a friend, Daedalos. Is this not so?"

"Yes, my lord."

"Then why did you betray me? Tell me, why?"

Daedalos made no answer.

"A hollow cow." Minos shook his head in wonder. "Who else would have thought it? Hidden in a hollow cow, part of the harem of the sacred bull, snuck out of the palace right under the very eyes of the palace guard."

Even Minos believes the stories, thought Daedalos, that she has a secret lover. Of all the things the queen might have asked of him, Daedalos had at

first found it hard to believe that what she had wanted was but a few hours of freedom, to leave the palace to walk alone in the grass and smell the spring flowers away from the ever-present guards of her palace suite. But she explained how well guarded she was, and how carefully watched, until at last he did believe it and agreed to help. He knew how much a person would risk for the illusion of freedom. But how could he explain all that? How could Minos believe him, if he did? "Pasiphae never betrayed you, Minos."

"She can lay with the bull of Knossos himself, that matters little to me." So the king, too, had heard the stories. "But could you not have known that I rule by the grace of the goddess only as long as her avatar is my consort? And it must be clear — there cannot be any slightest doubt — that her daughters, the priestesses, are my offspring. This is what you jeopardized. If the people lose their faith . . ." He tossed the axe aside. "This was not worthy of you, Daedalos." He shook his head. "I cannot kill you. You have been my friend, and kings have precious few friends."

The king laughed, grimly. "You are harmless, it seems, only when you are kept busy." He was silent for a moment, brooding. "This toy we have taken from Athens seems more than as much trouble as it is worth. Could I but trust them, I would as soon be rid of the thing. But, as yet, I dare not. It must, for the while, be kept safe. I give you a project: build me a fortress without gates! Build for me a labyrinth, with corridors that twist and turn so much that none who enter can again find the exit!"

He had done as Minos had bid, built a labyrinth of granite and marble, on a tiny mountainous isle in sight of the harbor of Knossos. In the storeroom at the center were placed the treasures of Knossos, the owl of Athens, and the statues of the snake-goddess and the bull-god. And the twistings and windings of the corridors were so cunning, so wrought to deceive the traveler, that one could indeed get lost inside, unable to find the entrance.

The wind, an invisible river of air, rushes in from the sea and strikes against the cliff. But it cannot blow through solid rock, it must flow up, over the cliff. Up. This is the sea gull's secret: in front of the cliff, the breeze blows upward, so the sea gulls can sail effortlessly, without having to flap their wings.

"Feathers, Eki! Collect for me feathers, all the feathers you can find!" And Ekaros scampers off to scour the scrubland, returning to his father with feathers clenched in his fists, feathers under his arms, feathers in his mouth.

At low tide, Ekaros stands on the beach at the base of the bluff, grabbing fistfulls of feathers and tossing them up over his head, where they are grabbed by the breeze. Now Daedalos can see the river of air, see how it flows up over the cliff. Daedalos stands on top of the bluff, Ekaros below tossing the feathers, and watches how the air rises in front of the ridge, flings the stream of feathers so high he cannot even see them, and hurls them down to earth again far behind him.

But it is not enough. Now Daedalos knows how he can get into the air, but not how to get off the island.

He continues to build models, bigger and bigger models. Now he builds one with a wingspan as large as his outspread arms, with a rock twice the size of his fist suspended below.

And he keeps on watching the gulls, searching for clues.

The labyrinth built, Daedalos was once again in the king's good graces, although Minos was now most often busy. The conqueror king, ironically, took no pride in his conquests, had never had pride in the fruits of war. Free of the threat of the sea pirates, he now had turned to his chosen task and worked night and day to construct a system of laws to guide and rule men, one that would last long after his body was burned and his ashes returned to the goddess. Occasionally, he sought Daedalos' opinion on a difficult point, but he remained always a bit more distant than he had formerly been.

Daedalos, too, kept busy. Mornings, he would work on mosaics and sculpture, plans for extravagant, elaborate buildings, a great painted dance floor for the high princess Ariadne. Afternoons, he labored over problems of metallurgy — how much tin to add to the copper to make the longest-lasting bronze? Are there other metals that would make, perhaps, even harder tools? In the evenings he would return to the palace to play with his son.

One week, working feverishly, he invented a way to make a statue out of bronze, by carving the form in wax and then making a mold from it in clay. The people of Knossos had little interest in statues, bronze or otherwise, and his invention was to them little more than a novelty for making small knickknacks and toys. He only made one bronze statue, to demonstrate for his own satisfaction that it could be done. It was a larger-than-life statue of a warrior youth, dressed for battle in bronze armor. He used no model, and only after it was complete and the cocoon of clay shattered did he realize whose face his fingers had modeled: Talos. He thought then to destroy it, but his pride would not let him.

And the years went by.

He turns his attention away from the seabirds to watch the buzzards and hawks that occasionally venture out to the island. They, too, often soar without effort. In the afternoons, they seem to circle around an invisible column of air that rises up from the very center of the island.

Slowly, he puzzles it out. The sun warms the earth, the earth warms the air, and the hot air rises like smoke into the sky. It is this rising air that forms the invisible column that holds them up in the sky.

Now he knows how to escape Minos' prison.

He was at the forge, hammering bronze on a granite anvil. But for a loin-cloth he was naked, his muscles so sheened with sweat that he himself glist-

tened like polished bronze in the sanguinary light of the coals. His eyes bloodshot from staring into the heat, his skin burned dark red-brown, half-way hypnotized by the smell of the glowing coals and the hot bronze and the beat of his hammer, he almost didn't hear the sound of his name.

"Prince Daedalos."

He turned. It was Ariadne, Minos' eldest daughter. He signaled for a break and called a slave for a towel, then walked with her to a sitting room. "It has been a long time since I've heard that name, Ariadne."

"Yet still you are."

He shrugged. "And so? With the fifty sons of Pallas waiting like vultures for the throne of Aegus, I think that being a prince is a thing of little value." He looked at her, trying to guess why she had called on him. Ariadne was tall and slender, with large dark eyes and small breasts barely obscured by a thin, diaphanous blouse. She was just beginning to outgrow the heifer awkwardness of adolescence. Her hair, normally braided and elaborately coiled, was now loose. At her throat a tiny bronze and silver ibex with emerald eyes hung on a fine gold chain. The animal had its head half-raised, just turning toward the watcher, as if it had been startled by hunters while in the midst of a drink. Daedalos had made it for her for the festival of sun's return a year ago.

"We need your help to defeat the labyrinth."

"You mean Theseus needs my help," he said wryly.

"We are together," she said defiantly. "Now, and forever." Theseus was the latest of the Achaean princes to serve as hostage against the good behavior of Athens. Minos had thought to marry him to his daughter Ariadne, thus to seal by marriage the alliance started by conquest, but Daedalos wondered if the king realized just how deeply Ariadne had fallen for the young prince.

"I see. Does your father know about this?"

"Of course not."

"Then why should I help you? Minos is my protector."

"Is he your friend?"

"I need no friends."

"Theseus is your cousin. Doesn't that mean anything to you?"

He thought about Talos, who had been so bright, and so arrogant. He smiled grimly. "I murdered my nephew, and I was sold into slavery for it. My family counts me as one dead. Do you think I care so much about them?"

"But I love him, and we need your help. Don't you care about love? Have you never been in love?"

"No."

"Then it is true." Ariadne was bitter. "You have no more feeling than one of your famous statues."

"Maybe so." Daedalos looked at her. After a while she looked away. "He

is only using you against your father, Ariadne. Can't you see that?"

"I don't care. I'd rather be used willingly by him than be used unfeelingly as a pawn in the political games of my father." She tossed her hair. "We don't need your help, anyway. We can find our way into the labyrinth without you."

"Indeed you can." The way into the labyrinth was easy, deliberately so. One need only always chose the ascending path, for the center of the labyrinth was also the highest point. "But the question is, can you find the way out again?"

"Surely. By remembering the way we came in."

Daedalos smiled. He remembered how he had taken Minos in, the day it was finished, and how the monarch had been so certain of his way out. They had spent the day in the labyrinth, and much of the following night — dining on the barley-bread that Daedalos had thought to bring along — before Minos had admitted defeat and asked for help. Even with the map and his knowledge of the maze, Daedalos had made several wrong turnings before reaching the exit. "I think you will find it not quite so simple."

Ariadne scowled. "If we always keep one hand on the wall, then sooner or later we are sure to find the exit."

Minos had tried that, too. "Perhaps so, if one less clever than I had designed it."

"I don't care. Somehow we will find our way."

It was a challenge. If he had to enter the labyrinth and escape again, how would he do it? It would be easy enough to mark the path with chalk on the walls. But they would best leave behind no sign to show they'd been there. Was there a way to enter and leave, and make no sign? Of course. The string through the shell. For a brief moment, he was back on the beach, proving to Minos his worth. A string unrolled through the labyrinth, guiding the way, that could be rolled up again, leaving no trace.

"I see. Then, so be it."

And so he helped them after all, betraying Minos for a second time. Only after Theseus and Ariadne had sailed for Athens did Minos discover that the Achaean not only had stolen the sacred owl of Athens from the labyrinth but also had smashed the statue of the bull god, symbol of Minos' power, and then had abandoned Ariadne to the sea.

Minos had been greatly displeased. "Eighteen years ago I set you free, Daedalos. I will not go back on what I did then. But I cannot trust you any longer in Knossos, and you are too dangerous to be allowed to return to Athens. What, then, do you suggest I should do with you?" Again Daedalos had been silent. In the end, Minos had exiled Daedalos and his son to this tiny, rocky island. Minos' ships — the sleek, swift galleys Daedalos had designed, the fastest and best warships in the world — patrolled the ocean, making sure he would not escape.

* * *

Now that he has learned to think of the air as an invisible river, constantly in motion, he can deduce from tiny signs — the shimmer of heat in afternoon, the way the birds tip their wings, the shape of the clouds, the trace of dust picked up by the wind — where it is rising, and where it falls. He begins to plan his escape: into the air from the ridge, then gain enough height to make it across the treacherous downdraft behind the ridge and into the rising column in the center of the island. From there, gain height enough to hop over the narrow stretch to Krete, where he could already see that the updrafts were large indeed. The warm air rises; the cool sinks. By hopping from island to island, on pillars of warm air they could cross the sea to Athens.

He begins to teach Ekaros geography, drawing in sand the islands of the middle ocean. Dia, Andikithira, Kithira; Thira, Naxos, Kasos — the names roll off his tongue like incantations. Looking at Ekaros and watching how quickly he learns, he is reminded of another. For a moment he sits back in puzzlement, trying to think of who it is that Eki reminds him of, and then the memory hits: Talos. Talos had sat just so, with the same expression of concentration.

It has been a long time since he had thought of his nephew Talos.

Talos had been apprenticed to Daedalos. Daedalos had been supposed to teach him, but the boy seemed unwilling to learn: he seemed to think that anything he didn't already know was unimportant. But he was clever, Daedalos had to concede that. When his sister first brought the boy in, Daedalos had been working on clay, trying out various new glazes to see what materials would make which color. There were several that he had hoped would make a more vivid yellow, but so far none had held up to the fire. While working, he thought about ways to work the clay and talked his thoughts out against his new apprentice. Pots and jugs took so long to make regular, and if the potter hurried, they came out lopsided, not at all pleasing to the eye. What the potters needed, he said, was a table which turned around. This way, one could work on all sides of the pot in rapid succession, rather than stand up and walk around the pot.

Daedalos set the glazes out in the sun to dry, and then went out on a day-long trip to the north, leaving the apprentice behind to mind the workshop. A shepherd had told him of an outcropping of yellow stones, which he thought might serve as a glaze. The trip, unfortunately, was unavailing; the stones were of a type he had already tried and discarded, and not nearly as bright as the shepherd had described.

When he returned, the workshop was a mess. The boy had taken the axle off one of his smallest chariots, augered a hole in a table, and set the axle in, with a flat plate of wood on top. Using his feet to turn the lower wheel, he had a lump of clay on the upper wheel and was quickly turning it into a pot. So stunned had Daedalos been to see his idea so swiftly put into practice that

he gave the boy only a cursory whipping for using his workshop without permission.

By the next day, the story was all over Athens, how Talos had invented a potter's wheel, and Daedalos, in a fit of jealousy, rewarded the lad with a beating, then tried to claim the invention as his own.

He held his peace, even when he overheard others laugh about how the proud Daedalos had at last been bested. It was harder to keep calm in the next weeks, when he heard other people remark how much more realistic his most recent statues had been, then ask, smirking, how much his apprentice had helped. It did no good to pointedly explain that the apprentice was not yet even allowed to work on stone. He'd always made a point of not caring about the opinion of the common mob, and it hurt him to discover how much it could sting.

He completed the wings for Ekaros first. It is a huge, triangular frame made from sticks of oak, with a loose linen covering and braced with cables made out of twisted gut to hold it stiff. The surface of the linen is crisscrossed with lines of wax, to prevent ripping. Below it is a framework where Ekaros can sit, suspended beneath the wing, with a bar to push it forward and back to control the flight.

He starts by having Ekaros practice flying from a tiny dune barely higher than Ekaros is tall. "Push the bar away from you to slow down, toward you to increase speed!" Ekaros quickly masters the art of takeoff. They move to progressively higher dunes, still only in the early mornings. Ekaros takes to the air naturally, as easily as walking or swimming. After he learns to fly on windless mornings, Daedalos lets him fly with a slight breeze up the slope, allowing him to descend more slowly and even, on occasion, hover without descent at all.

Daedalos continues to work on making a larger set of wings for himself. He looks up at the large ridge on the island. It will take a lot of courage, he thinks, to brave that height. Involuntarily, he thinks again of Talos.

It was a second discovery that killed. All through the night, storm winds lashed and storm waves surged across the middle sea. In the morning, Daedalos took Talos out to the seashore to look over what the storm had brought in. Talos picked up the jaw of a large fish, ran it over the palm of his hand, feeling the sharpness of the teeth, then dropped it. Daedalos watched and began to think.

Back in his workshop, Daedalos duplicated the teeth on a sheet of bronze, while Talos looked on. "To look at what everyone has seen before and to see something no one before has seen, that is art," he said. "To carve out your vision in clay or bronze, that is craftsmanship. Do not belittle either one, for greatness requires each together."

"But what is it?"

"Watch." He picked up the toothed sheet and rubbed it against a block of wood. It bit immediately. "See how it cuts the wood?"

"So? You could cut it as well with an axe."

"True," said Daedalos, "but look how smooth this cut is. And also, by cutting this way, we have much better control over the cut, where it is and how deep."

"Nothing that a good craftsman with an axe could not do."

"Perhaps."

The next day Daedalos rode up to survey the Akropolis, a rocky hill at the edge of the city, where King Aegus had asked him to design a temple to the goddess of the Owl. By the time he finished his survey, it was already night-fall, and so he picked his way back toward home, rather than to the workshop. On the way he stopped by a wineshop. Two customers waited in line before him.

". . . Better quality table than any I've seen before."

"Indeed, so I've heard tell from others as well."

He cut into the conversation. "May I ask what you are discussing?"

The men turned around. "Good evening, Master Daedalos. Have you not heard?"

"I've been gone for the day and heard no news."

"Figures." The one looked at the other. "Then while you were gone, your apprentice has been busy indeed."

He didn't wait to hear more, but headed directly for his workshop. Once again, the workshop was in a mess. Talos had built a table while he was gone. It stood in the middle of the outer room, the visitor's room. The wood was clearly sawn, not cut. The craftsmanship was perfect; it was amazing how quickly the boy had picked up skill in using the new tool.

By next morning, he was a bit tired about hearing of "Talos' new invention." When he got to the shop, the apprentice was already there, proud to show off what he'd made "with your new tool." So when I'm present, Daedalos thought, Talos is careful whose invention he calls it.

"Get your cloak," he said abruptly, cutting off Talos' talk, "and follow me."

Atop the hill, Daedalos stopped for a moment to look over the site of his temple. He could already see it in his mind, the graceful pillars, the statues. Then he turned to find Talos. The boy stood at the edge of the cliff, looking wide-eyed out across Athens. Interesting, thought Daedalos. The boy has no fear of heights.

"Many people seem to have seen your new table yesterday."

"Yes. Isn't it wonderful? The saw works superbly."

"It does," said Daedalos dryly. "So well, in fact, that many of the people who saw it seem to have somehow come under the impression that you invented it."

"Did they? I meant no harm."

"I'm sure you didn't," Daedalos put a hand on the boy's shoulder. "Still, you should be careful what you tell people." He pulled back his hand, intending — what? To strike him? To frighten him? To push him? Later, he could not even remember. Talos shrank away, stepping back. Over the edge.

Talos shrieked. Daedalos reached out wildly and managed to catch his arm. For a moment he held him safe, and then the edge of the precipice broke away. His grip slipped, and Talos, screaming, fell.

I tried to save him, Daedalos thinks, astonished at the memory. For all these years I have borne the guilt for a deed I never did. How could that be? Only now can he recognize the feeling he had for Talos: it was love. He looks down at Ekaros, and suddenly a surge of love fills him. This time I will not let go, he thinks.

Ekaros is eager to try the large bluff. At last Daedalos consents. His own wings are almost completed; soon they will be flying away from the island forever. He picks a day with clear sky and a modest, steady breeze flowing up the face of the ridge.

Many times he has explained to Ekaros the plan: to rise up in the slope lift, then cut back to the column. Today, he is only to try out the slope.

Holding his wings over his head, Ekaros takes a run and jumps off the cliff. He launches without trouble and hangs in the steady lift off the slope, easily angling across the face and back again, steadily gaining altitude. "Eki! Don't fly too high!" It is a pointless warning, since there is a thousand feet of empty space under his feet already.

"Don't worry, Daddy! It's easy! This is fun!" For a moment Ekaros takes his hands off the control bar, showing his father how easy it is, then, as the glider's nose dips, quickly grabs back onto it. He regains control and continues to rise.

"Ekaros! That's enough! Time to come down!" But he can't, or won't, hear. He is at a frightening height now, but in fine control, flying majestic curves back and forth across the slope. The breeze stiffens, and Ekaros takes advantage of it to gain yet more altitude. Now he looks downwind. The up-draft over the center of the island is tempting, if he has enough altitude to make it across the turbulent downdraft behind the slope.

"Eki! You can't make it! You don't have enough altitude!"

But Ekaros cannot hear. He turns the glider downwind. He holds the nose down, rushing across the sink at full speed, but not fast enough. "Ekaros!" The wind picks him up, almost playfully, then flips him over and hurls him toward the ground. "Ekaros!" As he falls, Daedalos can see him frantically trying to right the glider. But it is no use, since one of the wings has already broken. "Ekaros!"

Splinters of wood and shreds of cloth fly as the glider hits the rocks.

Talos, perhaps the only one who could ever have become his intellectual

equal. Naucrater, who after bearing his son stayed behind in the sacred grove. Minos, whom he twice betrayed, for no better reason than to show his cleverness. Everyone who had ever been close to him, or tried to, he had betrayed or killed. And now Ekaros.

He cries then, at last. For Ekaros. For all of them.

Slowly, methodically, he shatters the spars of his half-completed wings. The wood breaks into sticks, then kindling, then splinters. As he pounds, tears roll across his nose and splatter onto the cloth. No man has ever seen me cry, he thinks. It is bitter consolation to know that no man sees him still.

But what else is there to do, but to continue? He had set himself the task of escaping, and though his reason for it is gone, he has never failed in a task he has set himself, not ever.

Where there is heat, the air rises, like smoke to the cold immortals. Abandoning his old ideas, he makes his plans anew.

Daedalus mounts the bluff, not bothering with a practice flight. There is no point in it. On an autumn day when the wind blows to the north, he stakes what he has made to the ground with strong cables. The wind catches it, puffing it out, billowing it open while he lights the bonfire beneath. Like a mushroom it swells, straining at the ropes. Slowly, he climbs into the basket. When the balloon has swollen to fullness, he cuts the cables, and the island shrinks away below him.

Perhaps the wind will carry him across the narrow sea to his home. Perhaps he will have too little fuel, and he will founder in the ocean. Perhaps the wind will shift and carry him far away, to Illium or Phoenicia or distant Khem. It no longer matters. Nothing matters.

Suspended in his cage beneath his chariot of linen and rope, he soars away into the sky.

MOVING?

If you're a subscriber to **Amazing® Stories** and you're planning to move, remember that you have to tell us your new address in advance to guarantee uninterrupted delivery of your subscription. Give us at least 4 weeks' notice (6 weeks is even better), and inform us of both your old and your new addresses with a simple note or postcard, or by filling out and sending us one of the change-of-address cards available at your post office.

Send your change-of-address notification to **Amazing® Stories**, Subscription Dept., P.O. Box 110, Lake Geneva WI 53147.

FANTASY OF A '50s FAN

A cold and wet December day in 1954
Found me, a brand new SF fan, outside the old bookstore.
In hand a dime and quarter and a penny for the tax:
Today this month's *Astounding* will be put on the racks!

And I, a small teenager with a macroscopic mind
Could barely bear the monthly wait for treasures I would find:
John Campbell's editorials — psionics, science, space —
But wait! That's *ASF* up there! It's in another place!

I ran inside but slipped and fell, my beanie left my head.
Apparently for quite a spell they thought I was dead.
But in that semi-stupor state a time warp of some kind
Engulfed my brain in weirdly pain and circumstance was kind.

For when I woke I found myself on unfamiliar floor
And the writing on the window said
THE SCIENCE FICTION STORE
But backwards script I couldn't read (such pounding in my head!)
And so I took a look around inside the place instead.

The strangest sights a fan e'er saw confronted my young eyes:
(I didn't know that Clarke had done *Fountains of Paradise*!)
Then hundreds upon thousands of paperbacks I saw;
Above them, SF paintings and posters on the wall!

MiGod! I thought, I've died at last and this must be Fan Heaven!
(What are all these *Ringworld* books? Who is Larry Niven?)
At once I scooped up all the books by Heinlein and van Vogt
(Was overwhelmed by Asimov — look at all he wrote!)

And all this SF stuff's for free, yes everything I've seen!
(Now what in Fandom's "Middle Earth?" Who's J. R. R. Tolkien?)
By a large display of SF prints I piled my load of books
And went up to the poster wall to have a closer look:

Movie stills from picture shows that I had never seen:
"Two-Oh-Oh-One" and *Star Wars*, *Star Trek*, *Soylent Green*;
Buck Rogers (I knew him, of course), *Alien*, *Logan's Run*.
('Twas weird, I'd been a fan a month and never heard of one!)

The movie stills from the NASA films were not well done at all:
Those ugly, bug-like rocket ships, and spacemen golfing balls!
(A series? Dull, I wondered: repetitious and no BEMs?)
And phoney planet pictures, hoked-up by PR men!

I nearly lost my fannish mind when I saw the naked girls!
Some guys — Frazetta, Boris — drew the best ones in the world!
Then as the shock wore slowly off I snooped around the stands
Surprised to find some paperbacks by guys I thought were *fans*!

Then row on countless, endless row of SF books I saw.
(Good thing I'm dead; were I alive, I couldn't buy them all.
But if I'm dead, there's time to read — I've got Eternity!
Just look! There're books on SF *art*! and SF *poetry*!)

I settled down then, quite content, with stacks of Ray Bradbury
Till I heard a sound, jumped up to run, grabbing all that I could carry.
In haste to flee whatever came I had another sprawl;
In falling, ripped a picture down from off the poster wall.

Then I came to, was back again, my beanie by my side
The owner somewhat overjoyed because I hadn't died,
So he gave me the *Astounding*, let me keep my modest change
And the poster I was clutching. (The last, I thought, was strange.)

I staggered homeward, dazzle-eyed by this fantasy of a fan,
And half-believing, took a look at the picture in my hand.
A dumb old hoked-up NASA pic! I shredded it and cried!
(Could *you* believe the moon, Io, made from a *pizza pie*?)

— Arlan Andrews

***Amazing Stories* congratulates
its 1987 Nebula Award nominees:**

Paul Di Filippo for "Kid Charlemagne" (September 1987)

Susan Shwartz for "Temple to a Minor Goddess" (January 1987)

BLIND SAM **by Rick Shelley** **art: Hank Jankus**

The author is a historian by training and has, on occasion, taught history. Like many other writers, he has held an odd assortment of jobs, from accounting to selling liquor. And he persistently tries to get people other than his family to read his stories. Apparently, he's been successful, as his stories have appeared in Analog, Universe 16, Space & Time, and Threshold of Fantasy. "Blind Sam" is the author's first appearance in the pages of Amazing® Stories.

With a little more time, Blind Sam might have become the most-decorated American soldier ever. The defense of Fort Bliss brought two promotions and three medals, including the Medal of Honor. The Rio Grande campaign added another promotion and two more medals, but it also cost Sam a pair of enchanting blue eyes when an antitank rocket hit a weapons carrier, less than a week before the U.S. Army withdrew from the fighting in the area of Big Bend National Park.

Burning pain, then a void that eventually gave way to duller, almost distant aching. At first, Sam was content to float in anesthetic limbo. Conscious thought was transitory, suffocated between dreams that were themselves forgotten as Sam shifted back and forth among the varieties of unconsciousness. After a time, the real world started to intrude. There were vague voices, words indistinguishable until. . .

"Sergeant?" A distant call. Sam didn't respond.

"Samantha?" That engaged Sam's attention. She couldn't recall the last time anyone had used her full name — it had been a dozen years, at least, when she was eight or so. *Who?* Not her father. Sam never knew him. Not her mother either. *She* had called Sam Sam almost from the cradle, and *she* was gone before Sam's ninth birthday, killed in a car crash.

"Sergeant Jasper?" Sam tried to look to see who was calling, but she couldn't see anyone. *She couldn't see!* Then she remembered the flaming explosion, the burning debris, the pain in her face. Sam tried to shout "I can't see!" but her mouth was too dry. She couldn't speak.

"Here, try a sip of water." Sam felt the straw at her lips and tried to suck in a river.

"Whoa. Slow down." The straw was withdrawn, then replaced. "There, that's better. How do you feel?"

"I can't see."

"I know. Other than that."

"Okay, I guess."

"I'm Doctor Carl Stander."

"What's up, Doc?" Sam asked, but she had neither the energy nor the inclination to laugh.

"I'm glad you're up to joking," the doctor said, though he had heard the line thousands of times.

"What about my eyes?" Sam asked.

"We couldn't save either one."

Sam took a deep breath and then asked, "What next?"

"When the sockets heal, we put in prostheses."

"No more baby blues?" There was bitterness rather than humor in the question.

"You can have any color eyes you want."

"What'll it be like, arcade-game cartoons?"

"I think you'll be pleasantly surprised," Stander said. "It won't be 'like new,' but we've come a long way from white canes and guide dogs."

"Is anybody here?"

Sam had slept at least once since talking to the doctor, and she had been dozing again. Something — some noise, perhaps — had wakened her.

"I'm here, Sam." She recognized First Sergeant Johnson's voice. He wore the nickname "Frog" for a good reason. "How you doing?"

"Just dandy. Know anyone who wants a blind gunner?"

"I hear they fix people up real good here," Frog said stiffly. After 28 years in uniform, he still had trouble relating to women soldiers.

"Big robot eyes," Sam said. "'Blind Sam, the Thing From Outer Space.'"

"I don't guess it'll be that bad."

"That's easy for *you* to say."

"Damn right." Frog's voice slid into his command tones. "It's easy because I know you're a damn good soldier. Just don't *you* forget it."

"Sorry, Frog. I got no right unloading on you. Thanks for coming to visit." Sam lifted a hand toward where she thought Frog was. He reached out and held the hand.

"I come to see everybody," he said. "The captain's here, too."

"What happened to him?"

"He got burned bad, dragging you out of the weapons carrier. He's over in the other wing."

"Dragging me out?"

"I guess you wouldn't remember that." Frog Johnson had held the hands of wounded comrades in three wars, comforting the dying or encouraging those who were waiting for the medics. But he hadn't aged so much that he wasn't aware that Sam was different from any of the others. Five feet four and just a feather over 100 pounds on the best of days, she was definitely dif-



ferent.

"Captain came out of the burn tank five days ago," Frog said.

"Five days?" Sam's grip tightened. "How long have I been here?"

"Twelve days. You were hurt pretty bad yourself."

"What besides the eyes?"

"Some burns, not too bad. Some cuts, all pretty much healed now. No real scars. Once you get your new eyes, it'll be hard to see that anything even happened."

"Yeah," Sam mumbled. "The greatest freak show on earth."

"Gotta go," Frog said, releasing Sam's hand and pretending he hadn't heard her last complaint. "More stops to make."

"Thanks for coming, Frog. And tell the captain thanks for me, for pulling me out of the carrier and . . . and everything."

"Roger." Frog hesitated. "Cap's been through surgery twice for grafts — something I guess you're going to escape. Every time he's ready to get up and move, they put him on the table again. He'll be along to see you as soon as he can. He said to be sure to tell you that."

With most of her medication withdrawn, Sam had to face her dreams and fears. She couldn't accept that she might soon see again . . . not really *see*. The blindness felt too permanent. And, without sight, time lost much of its meaning. Sam kept track of its passage by counting meals. She ate seven times before the captain came to visit.

"Hello, Sam. How're you doing?"

"No pain, Cap. How about you?"

Captain Philip Newton grunted. "When I don't hurt, I itch. I don't know which is worse."

"My fault. If I'd gotten out on my own, you wouldn't be hurting."

"Goes with the territory."

"First Sergeant said they're giving you grafts."

"Skin and muscle." His voice moved as he sat. "They're using some fancy kind of elastic for the muscles and a combination of plastic mesh and real tissue for the skin. Feels like they're sewing fly swatters to my back and shoulder."

Sam laughed — for the first time since waking in the hospital — but her good humor vanished shortly after the captain left and Doctor Stander came in.

"Ready for your new eyes?" Stander asked, examining her eye sockets.

"Already?" Sam asked, startled.

"Well, we need to measure the sockets first. Then we can order your new, blue eyes and put them in."

"Don't you have to put in connections for the nerves and muscles first, or *something*?" Sam asked.

"We did that while you were still unconscious."

"Anything else you forgot to mention?" Sam snapped. She clenched her fists at her sides, trying to control, and understand, her outburst.

"I should have told you sooner," the doctor admitted, "but it was a minor procedure. Routine. And I *couldn't* tell you at the time."

Sam didn't pursue it. Orderlies moved her into a wheelchair and took her to a treatment room. And even though Sam was given a sedative, "uncomfortable" was too mild a word for what she felt while the doctor and a technician poked around inside her eye sockets. Each touch caused Sam to cringe — usually just mentally, but sometimes her body echoed her distress. Lights measured the curvature of the cavities. Slight pricks of electricity tested the elasticity and response of muscles. Calipers rotated to find the narrowest diameter on several axes. "Careful here," Stander said at one point, "I've got to be careful with this yardstick." Sam was too tense to listen. She wanted to jerk her head away; she wanted to get up and run. But her head was held in position by a padded vise. Her body was strapped down. Even her eyelids were held open by clamps. The sedative seemed ineffective.

"There, all done" didn't come an instant too soon. Sam's clenched fists loosened up. Almost like going to the dentist, she thought — apprehension, fear of pain, little sensations of work being done. *Open your eyes wide. Look at the pretty new teeth we've stuck in those nasty scarred sockets.* The image made Sam gag and convulse in brief horror.

"You're lucky you had such big eyes," Stander said while the restraints were removed. "I was afraid, since you're so petite, that the sockets might be too small for full-function prostheses."

I hate that word "petite," Sam thought. All her life, she had gone through hell because of her size. *You're small for your age . . . petite. Okay, jailbait, show us what you can do.* Images and memories. Life in school, on the street, and even in the Army. *Hey, little girl, why d'ya wanna play soldier, anyway? Run along home and play with your dollies. You're too damn small for this man's Army.* It all flashed through Sam's mind in an instant. Why do I always have to prove myself? *Who'd ya sleep with for that promotion? Or medal. Or pass.*

"Damn them all to hell!"

Sam was slow to realize that she had spoken, let alone shouted. But the sounds around her, even the little noises of shuffling feet and tinkling instruments, stopped and only slowly returned to normal.

"Sorry," Sam whispered. "I got trapped in some old memories."

"We're done now," the doctor said. Sam was moved back into her wheelchair. "We'll have your new eyes the day after tomorrow."

Doctor Stander escorted her back to her room. "There'll be more times when you get frustrated. Mad. Anything can set it off. And you'll need time to get used to the new eyes. Don't let your emotions tie you in knots. We're used to it all. Don't add to your problems by feeling guilty when you let go.

Just move on to whatever's next. That's better than bottling it all up."

"We're ready to put in your new eyes."

The two days had passed — slowly at the time, all too fast now that *this* time had come.

"I'm not sure that I'm ready," Sam told Doctor Stander.

"This won't be as bad as the measuring," he promised.

On the way to the treatment center, Sam tried to flank the fear and tension by trying to recall every day of her basic training. There were gaps — basic training wasn't a time for conscious memories. The drill instructors worked to instill habits, not knowledge. Sam remembered the drills, the boring lectures, trying to learn when she could hardly stay awake. The dull fog, the almost trance-like state you reach when even the fear of getting caught can't keep your eyes open.

Your eyes.

The hikes — 10 miles, 20. Walk until nothing matters but the absolute heaven of being able to stop and sleep, being able to close your eyes for the night.

Your eyes.

The days on the firing range. Before you shoot, you blacken your gun-sights and smear soot under your eyes to cut down on the glare.

Your eyes.

"Hold out both hands, palms up," the doctor said. Sam held out trembling hands. "Together. Okay, Sam, I'm going to give you one of your eyes so you can feel it, start getting used to it."

Your eyes.

Sam felt her trembling increase. *Take one eye, squash it flat, and you've got a jelly sandwich.* The crazy thought was persistent, insidious. Sam bit her upper lip; it was flapping like a sheet on the wash line. She started to pull back her hands. . . .

"It's okay," Stander said softly. "You can't hurt it. The surface is plastic, with a little metal at the back for the nerves. The bulge in front is the lens. The tiny holes around the middle, if you can feel them, are where we hook up the muscles."

Standar put something the size of a nickel jawbreaker into Sam's hands and closed them around it. For a moment, she just clenched the cool sphere. Her mind was enveloped by a dark fog that denied vision. For the first time, Sam's blindness was psychic as well as physical. Consciousness itself almost fled. The sphere was warm before Sam brought herself to really *feel* it. She rotated it, felt the lens bulge and the metal plate. But she couldn't locate the tiny holes. This is one of my eyes, she realized.

MY EYES!

"Here's the other." Stander separated Sam's hands and put another sphere in the empty hand. Sam lined the eyes up, lens bulges toward her fin-

gertips, then rotated them together. When she extended her arms and opened her hands, the eyes gazed up and left, only a little cross-eyed.

Take them, she pleaded silently, and someone did.

"Don't expect a lot right away," Stander warned. "Your brain will need time to start processing the signals properly. You may see some wild things. Illusions. Mirages. They'll pass quickly, if you have them at all."

"Hallucinations?" Sam asked.

"Technically, but it'll just be your mind getting used to visual stimuli again. Nothing to worry about."

"I guess I'm as ready as I'll ever be," Sam said.

"Left eye first." And then Stander crammed a bowling ball into the socket.

That's what it felt like. Sam resisted until the pressure faded, leaving only an unfamiliar heaviness to that side of her face. Cool fingers pulled her eyelids apart again and attached the little clamps.

"Connecting the muscles now," Stander said. Tiny hooks had been attached to the important eye muscles. The hooks would slip into the microscopic holes on the eyeballs. Must have a big magnifying glass, Sam thought when she felt a thin blade slide in and catch a hook. Pressure built, faded, and returned as Stander connected another muscle. And another.

"You ever do any crocheting?" he asked.

"No," Sam managed through clenched teeth.

"This is a little like crocheting," Stander said as he continued. "You'll be able to do it yourself with a little practice."

"Why?" Sam asked, astonished.

"For cleaning. The tear ducts won't do it all." He finished the left eye. "Keep that closed while I work on the other," Stander said while he moved the clamps. The right eye went in, again with a momentary sensation of weight, even though the eyes weren't as heavy as real ones. The doctor connected the muscles and removed the last clamps.

"Blink." Then he had her hold both eyes shut. "I'm going to turn on the control unit," he warned. "When you open your eyes —"

"The hallucinations start?" Sam asked, interrupting.

"If you're going to have them. Remember, there's not much light in here. Now, slowly — very slowly — open your eyes."

"And there was light." Sam couldn't control her eyelids. They fluttered and danced. Tears poured down her cheeks, burning like acid. Blinking wasn't enough. Blinking just didn't . . .

"Don't squint!" Stander ordered sharply. "Close your eyes and try again. Slowly!"

This time was better: at first, no shapes or colors, just a white-out, like being in a madly swirling blizzard with snow blowing every way. Then, soldiers in white parkas and pants ran out of the snow. Winter training in Montana, Sam thought. The white became the beige of army paint. Fuzzy

objects formed in a flurry of kaleidoscopic adjustment. A large instrument stand. Behind it a person. People.

"It's all blurry," Sam said, unexpectedly calm.

"Try one eye at a time," Stander said.

"Blurry both ways," Sam reported after she tried.

"Can you see my hand?" The doctor held up his left hand and moved it from side to side. Sam's new eyes followed the movement, and she nodded.

"Close your left eye. Tell me when my hand looks clear." Slowly, the hand came into focus while a therapist adjusted the controls on the remote. Right eye, left eye, and then they switched to a conventional eye chart and an "is that better or is this?" routine while Stander fine-tuned the focus.

"It's like pictures in the newspaper," Sam said, looking at the doctor, really seeing him for the first time. He didn't look like what she had expected — heavier, shorter, and with a pasty complexion.

"Individual pixels," Stander said.

"You don't get outside much, do you?" Sam asked, staring at his face.

Stander smiled. He had a wide face, a pudgy oval. "Not lately," he admitted easily. "But now that the fighting's over, maybe I'll be able to go out and get a tan and take off 15 or 20 pounds."

Seeing was only the beginning. Sam still couldn't *do* much. She would reach for a glass of water and have to grope around — nothing was where it seemed to be. Walking was okay until she looked down and tried to watch where she was stepping. Then the messages got mixed up, and she would stumble. When the lighting changed, seeing changed. In dim light, her eyes perceived infrared. There were exercises, therapy. Sam had to learn how to do *everything* over. And she had to learn to control the remote — an amplifier, in part, that gave her two-power magnification and made it possible for her to take the eyes out and put them back in . . . one at a time, of course.

That was the hardest lesson. Sticking the hook past her eyelids was almost impossible. Her brain tried to protect the artificial eyes as though they were real. The first time, Sam needed an hour to get one eye out and in.

"It'll go faster with practice," her therapist said, "and as your eye-hand coordination returns."

If it does, Sam thought as Doctor Stander came in.

"Okay, Sam, here're eight coins." He dumped the change on her bed table. "Arrange them in order from penny to fifty-dollar gold piece." Put them in a row, equally spaced, penny on the left, platter on the right. Reverse the order. Vertical column. Knock one out of place? Start over. Stack the coins by size. By value. Reverse the order. . . .

Balance and coordination. Stand on one foot and then the other. Play hopscotch. And jacks. Sam found herself playing little-girl games she had rarely played as a little girl.

"Why not put me on a rifle range?" she asked. "That's the hand-eye coor-

dination I'm used to, not this shit."

"I'll see" was the best answer she could get.

Walk to the toilet and back. Walk up and down the corridor. Win a promotion and spend an hour going up and down stairs. For a break, punch elevator buttons. "You get the wrong floor, you walk the difference" was a ludicrous threat for an infantry veteran. Sam laughed and pushed wrong buttons on purpose. She survived the "punishment" better than her therapist/warder.

Learn how to read again. "Start with newspaper headlines — big print, easy on the eyes." The Mexican Liberation Army was retreating deep into Chihuahua. U.S. Army elements were being withdrawn from the border. MEXICAN GOV'T: VICTORY IS NEAR! REBELS: WE WILL FIGHT ON! Terrorists were blowing up taco franchises all over the U.S. SUBWAY SERIES IN CHICAGO AGAIN? L-5 BY 2025!!

Sam had to take her eyes out, clean them, and put them back in daily — for the practice. Stander came to examine her eye sockets and therapy charts, and to ask questions. Therapy lasted from breakfast to dinner, with brief respites for the daily exam, lunch, and her tantrums.

A week passed.

"How 'bout something different today?"

"Like what?" Doc Stander asked.

"Like I visit Captain Newton, all by myself."

"Sounds good. Let me call to see if he's up to visitors."

Sam got busy. Her belongings had been forwarded to the hospital. She wanted to look her best when she saw the captain. That let her work on her face without wasting time cursing the phony eyes or small, thin scars — eyes that looked more artificial to her than to anyone else. Clothes, fatigues, never designed for fashion. Sam had altered hers, but it didn't make much difference now. She was still far below her usual weight.

"Captain Newton had surgery yesterday," Stander reported. "He's not in the best of form, but his surgeon says visitors are okay."

Sam nodded. It was the first time she had been allowed to go farther than the bathroom alone. That buoyed her so much that she was almost cheerful by the time she got to Captain Newton's room.

"You awake, Cap?"

"Hi, Sam." He was laying on his right side, facing a window. The tinted glass muted the glare of the afternoon sun. "Come on in." He didn't try to roll to look Sam's way. The extensive bandaging would have been excuse enough, even if Sam hadn't known about his injuries and surgery. The captain, being a captain, had a private room. Sam had a double room to herself, but only because she was the only female patient in the eye ward.

Sam walked around to where Captain Newton could see her. "I hear they've been letting the students practice on you again."

"Yesterday. Here, have a seat. You look pretty good. How do the eyes

work?"

"I don't know. They won't let me out on a rifle range to find out."

The captain laughed, but it was obvious that it hurt him.

"How long are they going to experiment on you?" Sam asked.

"Three or four more operations. I'm supposed to get a break before the next one, though. Two weeks is what the surgeon says."

"This visit's all the break I get."

"I'm glad you came. You must be about ready to ship out."

"Nobody's said anything to me. Maybe I should ask for vocational rehabilitation first." Sam laughed. "I don't guess they'd train me in my old trade, though."

Captain Newton hesitated before he asked what that trade was. He wasn't sure he wanted to know.

"I've been on my own since I was 12, more or less," Sam started, shrugging to show that she really didn't put too much importance in that. "When my mother died, there were foster homes for a while, but that didn't work out so good. When I took off from the last one, I had to support myself somehow. Picking pockets seemed better than hooking." The captain started to laugh again, assuming it was a joke. But there was nothing to suggest humor in Sam's voice or face.

"You're serious, aren't you?"

Sam nodded. "I was good. 'Real talent,' they used to tell me." But she didn't say who *they* were. "It was easy work. I even managed to stay in school for several years. Like, in St. Louis, I paid a bag lady to act as my mother when I registered for school. Whenever I got caught dipping — and I did get caught a couple of times when I was still learning — I just took off from juvie and moved on. It wasn't hard, anyplace. I ended up in Chicago."

"That's my home town."

"I know," Sam said. "You ever get your pocket picked?"

"No." Newton did laugh this time. "How come you joined the Army?"

"It was a way off the street. But not for long," Sam added, turning toward the window. Her tear ducts worked well enough for crying.

"Nonsense. You're a certified damn hero, honorably wounded in combat. You've got the Medal of Honor coming. Hundred-per-cent pension, full medical benefits, commissary and PX privileges, GI Bill for schooling, job placement, Civil Service preference, and you've still got eyes that do the basic job. There're plenty worse off."

"Oh, sure. Getting my eyes burned out was the smartest thing I ever did," Sam said, her bitterness starting to show.

"You could have had your whole damn head blown off. They can't replace that yet."

The silence didn't last long, but it seemed eternal. "I know," Sam said then, her voice suddenly sounding exhausted. She looked at the captain, saw the look of pain on his face, saw the bandages on his back and shoulder —

bandages that he earned saving her.

"I know, Cap, and I know I get awful damn bitchy sometimes. I almost chewed the first sergeant's head off when he came to visit."

"That would be a first," Newton said, and they both laughed. Even company-grade officers stepped softly around the veteran noncom.

"You're good for morale, Cap," Sam said, and then she put her hand on his wrist.

"Well, so are you."

"Will you be going back to the outfit?" Sam asked when the silent looks back and forth got too uncomfortable for her.

"I doubt it." He had spent a lot of time contemplating his prospects. "Between the rubber-band muscles and the fly-swatter skin, I guess they'll survey me pretty fast."

"Made any plans?"

"I'll probably go back to Chicago and sell computers for my kid brother. He says there's money in it."

"We could set up a mob," Sam said, grinning. "You'll be the brains and I'll be the muscle. You know I can handle a machine gun." She could handle eight at once. That was how she earned her medals and wounds, running the fire-control console for four twin-mount rigs.

"If I do much more laughing," the captain said when he stopped this time, "I'll screw up all the work they've done on my shoulder."

"So sue 'em for malpractice. There's money in that, too."

"You trying to get even for something?" The laughter hurt a lot.

"I don't think so, Cap," Sam said slowly, as if she had to try to recall. "I guess I'd better start back." She stood. "Thanks for pulling me out." She leaned over and kissed his cheek. And giggled. "I've never done that to an officer before."

"Go. Get out," Newton said. "You hurt too much."

At the door, Sam looked back. "You know, since we're both going to be civilians soon, it would probably be okay if you asked me out to dinner some evening. I hear the food in the hospital cafeteria is perfectly awful." She hurried out before the captain could answer.

That visit seemed to mark a turning point for Sam. Her outbursts became rarer and less violent. She concentrated on her therapy, which led to dramatic improvements. It might be a long time before she was fully comfortable with the performance of her computer eyes, but she was making a good start.

The second week of therapy ended.

"I'm running out of excuses to keep you around," Doctor Stander told Sam. His daily visits were mostly for conversation now. "We've done all we can. Now, this is up to you, but I'd suggest you sign yourself in at the VA Halfway House when your discharge comes through. They do good work,

and they can ease your transition to civilian life.

"When do I get out?" Sam asked.

"Nobody tells *me* anything," Stander said. "You'll get some warning, though. Knowing the Army, they'll have a ton of bullshit for you to wade through first."

The therapy sessions became sporadic, leaving Sam a lot of free time. She couldn't get interested enough in TV to make up for the odd effects that the combination of TV pixels and eye pixels produced: dots made of dots, at different speeds and densities. Sam often walked to the PX or just out to the main base and training battalion areas, looking, saying good-bye to the career she was losing. Whenever she returned from a jaunt, she asked if she had missed any calls or visitors. But Captain Newton hadn't called, and he was the only one Sam had thought, hoped, might. She tried not to let it disappoint her, but it did.

Did I scare him off? Sam wondered. Suggesting dinner had been an impulse. During her two years in the Army, she had never dated or propositioned *any* officer. That could only lead to complications. I *do* know him better than I've ever known any other officer, Sam rationalized. Phil Newton was 30, divorced, and an ROTC product. He might never make general, but he was a good combat officer, popular, and . . . "He likes to laugh," Sam mumbled, and *that* seemed to be excuse enough.

Several times, Sam started out to visit the captain again, but she always turned in some other direction. "I'm not going to force myself on him," she told herself. It was a silly notion anyway, just another little-girl game she was playing — which didn't prevent an embarrassing flush of exhilaration when he *did* come to visit.

"You ready for that dinner?" he asked.

"I wasn't trying to trap you into anything," Sam said defensively.

"Nobody since Joanne has trapped me into anything," he replied, "and I escaped her snare years ago." He held up a hand. "I was just worried that I wouldn't be up and about before your discharge came through, but I am, and I've got big news for you."

"What kind of news?"

"What about dinner?" the captain countered.

"I'd love dinner."

"But not here at the hospital. You have any civvies?"

"Yes. Where are we going?"

"Into town. Is this evening too soon?"

Yes, it's too soon! Sam thought, but she said, "I guess not," and wondered if she *could* get ready for the real world that quickly. "Just how fancy a place?"

"Just a nice restaurant with good food and service. Is six too early?" It was already after two.

"I'll manage," Sam assured him, and she did.

"What's the big news?" Sam asked as soon as they said hello at six, but Captain Newton just smiled and shook his head.

"My discharge come?" Sam guessed, but he wouldn't answer.

"You know," Sam whispered once they were in a cab, "I haven't been around any civilians since before the siege of Fort Bliss started."

"Then this qualifies as part of your rehab," Phil said. "And by the way, you look terrific."

Sam actually blushed. She *had* gone to more trouble than she would have for a night with the guys from her commando team. She was wearing her only civilian dress — slacks were more practical — because it helped conceal her weight loss. She was down to 91 pounds, scrawny enough to get her kicked out of the Army. If a routine physical had been due, Sam would have pigged out for a week to get her weight up to the magic three digits. But she didn't have to worry about that anymore.

"Anyone says a word to me about 'you and your daughter,' " Phil warned Sam while the cab waited for a light, "I'll deck them."

Sam stifled a laugh. Her dress was a pale blue, to match her old eyes. Its simple lines did make her look younger than 20. "You don't look *quite* that old," she whispered, and then the laughter escaped, so raucous that the cabbie turned to look.

"Maybe not," Phil said, "but you look young enough for your first communion."

"Should I have worn my medals?" The teasing seemed to be a welcome relief for both of them.

When they reached the restaurant, Sam tried, "When do I hear the news?" again.

"After we get drinks and order dinner," the captain promised.

The restaurant's decor was subdued but not dark. They ordered dinner and drinks — coffee for Phil, Pepsi for Sam, after she turned down his suggestion of wine.

"I don't drink," she told him. Then after the waiter left, she added, "Anyway, you want to cause a scandal, pouring booze into a 'sweet young thing' like me?" When Phil stopped choking on his laughter, Sam asked, "Okay, now what's the news?"

"We have an appointment with the president Saturday. In Washington." Sam's mouth dropped open, but she had time to shut it while the waiter brought their drinks. She sipped her cola while the captain doctored his coffee with cream and sugar. The waiter left. Phil took a sip of his coffee.

"So what do I say?" Sam asked. "'How are you doing, George? Getting any lately?'" Phil didn't quite spit out all his coffee. He got a napkin to his mouth in time. Barely.

"You have a rotten streak a mile wide," he accused when he could.

Sam grinned. "I owed you that for all the suspense. What does the presi-

dent want with us?"

"Good press, I imagine," Phil said. "Formal presentation of your Medal of Honor. And, for some reason, they think I deserve one, too."

"For rescuing a fair damsel in distress?"

He was ready this time. "More likely for putting up with fair damsel's smart mouth."

"I've never been to Washington," Sam said.

"Just another big city. We fly out Friday and check into VIP quarters at Walter Reed. Saturday, we go to the White House with some others who are getting decorated. And families."

"Will your brother be there?"

"Lee and his wife are flying out for the ceremony then going home the same afternoon."

"Do we have to stay at Walter Reed?"

"Just until the ceremony. Afterward, we're on administrative leave till eight Monday morning. Got to be at the airport then."

Going back to the hospital, Sam sat on the captain's uninjured side. As soon as the cab pulled away from the curb, she started kissing him. He was taken by surprise, but responded quickly, matching her passion.

"They never bother me after lights out," Sam said as they went upstairs at the hospital. *That* statement was definitely not an impulse.

Phil Newton was a daring soldier, as much a certified hero as his gunnery sergeant. He knew when to take risks.

The president came out to the Rose Garden and spoke timeless words . . . mostly forgotten before the echoes died from the public address system. As the president made each presentation, an aide read the applicable citation. President Carsten presented the Medals of Honor and added his congratulations (or condolences, if he was awarding the medal to a next of kin). When Sam stepped up and saluted, the president almost forgot his lines. He had to listen to the recitation of her citation for a cue.

"Outstanding work, Sergeant Jasper," he said as he hung the medal around her neck. He sounded impressed. Almost startled.

Later, while Phil was introducing Sam to his relatives, a White House protocol aide interrupted to say that the president would like a few words with Phil and Sam. He led them to the Oval Office, where they spent ten delightful minutes. Sam liked President Carsten from the start. He liked to laugh. . . .

"I bet he'd even have laughed if I'd asked what I threatened," Sam told her captain that night as they lay together in a Rockville motel.

"Maybe, but the others would have had shit fits." He laughed, almost comfortably.

Much later, after hours of staring past Sam's face at the wall, Phil felt Sam

stir. Her eyelids fluttered open and closed.

"You awake?" he asked softly.

"Ummh," she mumbled, moving the few inches closer she could and snuggling up against him.

"You'll probably get your orders Monday or Tuesday."

"I know," Sam said, still sounding half-asleep.

"Decided what you're going to do?"

"Probably check in at the VA Halfway House in San Antone," she said, her voice gradually coming awake. "Let them point me in the right direction." She chuckled, then pressed her face into Phil's shoulder to stifle the sound.

"What was that all about?"

"I was just thinking that I may have trouble getting back into my old work. I might try to pick some mark's pocket and grab something he's too attached to. Getting busted for lewd and lascivious behavior would ruin my rep as a dip." She laughed again, but Phil didn't.

"You're not still thinking about going back to that, are you?"

Sam sighed. "I don't have any idea what I'll do permanent-like," she said, "but I've gotta prove to myself that I *could* do it if I had to."

"That's silly and dangerous," Phil said, "and unnecessary."

"I can't help that." Sam had expected this dialogue, but that didn't make it easier. All day Phil had been acting increasingly serious about them. Sam had to concede that she had been acting pretty much the same way, which made it even harder to explain this.

"You want to know how good I was?" Sam asked. Without giving Phil time to answer, she said, "One time I went to a big car show at McCormick Place. They must've had 20 plainclothes cops working pickpocket detail. I spent an hour, made my money, and came out with four cop wallets, the ones with their badges and police I.D.s. Not one felt me strip him. I mailed those I.D.s to the police commissioner with a note about how could he expect his cops to protect other folk's pockets when they couldn't protect their own. I was 15 then."

"If they catch you now, you're not a juvenile."

"So? The MLA didn't ask my age before they burned out my eyes."

"Are you going back to Chicago?" Phil asked a little later.

"Probably. I liked it there."

"It'll be six weeks, two months, before they finish patching me up," Phil said. "You could hang around San Antonio and go back to Chicago with me when I get out."

"No, it's too soon." Sam didn't hesitate before she said no, but then it got a little stickier for her. "Not just for you and me. I mean . . . I don't know what the hell I mean." She took a deep breath. "It's just too soon for me. I've got to find out how much I can do on my own with these damn plastic eyes. If I go from hospital to halfway house to watching you cram three minutes'

lies into a 30-second computer spot, I'll always be useless."

Phil tried to interrupt, but Sam wouldn't let him.

"I do that, I'll end up on State Street sitting with my medals, a bunch of paper flowers, and a sign that says PLEASE HELP THE HANDICAPPED." Then she had to stop. She was crying too hard to continue.

"I was thinking of marriage," Phil said, trying to wipe away her tears and bungling the job terribly.

That knocked the air out of Sam as surely as a punch in the stomach. She needed a moment to catch her breath and some sense of balance.

"Now who's trying to trap who?" Sam asked, still uncertain whether he was serious.

"Nobody's trying to trap anybody. I mean it, Sam."

He *did*, too. Even with phony eyes, Sam could see that much on his face.

"No, Phil. Maybe I'd like to say yes, and maybe it'd be the best thing in the world for me, but not now, not yet. I don't know. Maybe never. I can't say." They were both quiet for a long time. It was hard to muster a smile and a chuckle, but Sam finally managed.

"How 'bout we replay that last campaign?" she suggested, trying to sound playful. "You were Napoleon leading your army up the canyon and getting ready to charge into the underbrush at the big bend. . . ."

By Wednesday, Sam was a civilian and Phil was back in surgery. Sam checked into the VA facility and visited her captain nearly every day for two weeks — until he was recovered enough to spend a night with her and see her off at the airport the next morning.

"I will keep in touch," Sam promised. She had thought a lot about simply disappearing after they parted, finding a new city to operate in. There were lots of places she hadn't tried yet. But, finally, she had decided against that course. "And I'll call your brother as soon as I reach O'Hare."

"This may be a corny place to say it for the first time," Phil said while they waited to go through the metal detectors, "but I love you."

"Good thing these aren't lie detectors, too," Sam chaffed, but her smile was too weak to be convincing.

"We've still got time to cash in your ticket on a marriage license and wedding ring."

"Please, Phil, don't start again. Not now." She held his gaze until he nodded in resignation.

"Not now," he agreed, "but I'll be along in a few weeks, and I won't give up easy."

"I know." Sam smiled weakly. There wasn't much else to say. They waited in the boarding lounge until Sam's flight was called, then she held Phil and sobbed against his chest. They kissed, with some urgency, then Sam boarded her plane. Phil stood at the lounge window and watched while the rest of the waiting passengers boarded.


"Excuse me, Captain Newton?"

Phil turned to the stewardess. "Yes?" he asked, startled.

"A young lady who just boarded said you left this in her purse." She held out Phil's wallet. Instinctively, he reached for his hip pocket, his *empty* pocket. Phil had never put his billfold in Sam's purse. He had stuck it back in his pocket after paying the cabbie.

"Thanks," he said. "I'd have been in a fix without this."

"Glad to help." The stewardess smiled and returned to the plane.

Phil turned to the glass wall and finally spotted Sam's face pressed against one of the jet's windows. Laughing at him. Phil held up the wallet and shook his head in mock sorrow. Then he laughed back when Sam made a face. He wasn't positive what the words were that Sam mouthed against the glass, but he had little trouble convincing himself that they were "I love you, too." 

STELLAR BY STARLIGHT

The galaxies spin
The stars chart their course
The journey begins
The search for the source

Delicate spirals
Of nebulous lace
Lazily describing
With ponderous grace
Elliptical orbits
Frozen in place
Everything everywhere
Imprisoned by space

To find the beginnings
Look ye behind
To reveal the secret
Releases your mind
To touch a God-star
To witness its birth

To reach for forever
And not leave the earth
Faulted and feeble
Is the human soul
Within it lies waiting
The solution — the whole

I am part of that whole
That totals the sum
And structures those wheels
That in turn turn the sun
In a nuclear funeral pyre
From which I have come
I was born of that fire
I am part of the sun

I am part of the whole
That totals the sum
I belong where I am
I am part of the sun

— Chris Harold Stevenson



Exhibit

Brad W. Foster

Brad W. Foster began working as a free-lance artist seven years ago. His reason for entering the SF/fantasy art field was because "it's the only place I've found where the artist isn't limited simply to copying or interpreting reality, but can create his own reality when approaching every new drawing." Many of his black-and-white illustrations are highly detailed, decorative works that resemble old engravings or etchings.

Brad is currently writing and draw-

"The Neighbors," 1985



Brad W. Foster

"Mechthing," 1986



"Pharaoh," 1982

ing the *Mechthings* comic book series, and he operates his own small-press publishing firm, Jabberwocky Graphix. In addition to his work for SF/fantasy magazines, Brad is planning to illustrate a couple of children's books. And his efforts have not gone unnoticed: he won the 1987 Hugo Award for Best Fan Artist.

Those who are interested in commissions or purchases, or in finding out more about Brad's artwork, can contact him at his publishing firm. Write to: Brad W. Foster, c/o Jabberwocky Graphix, P.O. Box 166255, Irving TX 75016.



"Raven," 1987



THE BORING BEAST
by Harry Turtledove
and Kevin R. Sandes
art: Bob Eggleton



Lest any readers think the following story the product of a diseased mind, they should know it is the product of two. Harry Turtledove has published several novels, as well as short fiction in Amazing® Stories, Analog, Isaac Asimov's Science Fiction Magazine, Playboy, and elsewhere. He wrote this story anyway. Kevin R. Sandes, his unindicted co-conspirator, would like to deny everything, but Turtledove is hanging on to the manuscript. "The Boring Beast" is dedicated to the Anheuser-Busch Corporation, without whose products it would have been impossible.

An excerpt, O Prince, from an ancient chronicle:

A brisk westerly breeze drove the galley *Wasteful* into the port of Zamorazamaria. At the *Wasteful's* helm stood Condom, the Trojan, one massive fist clamped round the wheel. The other clutched a skin of wine. Six feet and a span in height, he would have been taller yet had the fickle gods favored him with a forehead. Only a leather kilt hid his bronze skin and bulging thews from the sun. His hide was crisscrossed with scars, all too many of them self-inflicted.

A sudden roll spoiled his aim, spilling wine over his face and down his lantern jaw. Muttering an oath, he groped for a rag — and the ship's ram crunched into the side of a beamy merchantman tied up at a Zamorazamarian quay.

Condom took in the situation with one fuddled glance. "Back oars!" he bellowed. The ram pulled free, and the merchantman, a six-foot hole torn in her flank, promptly began to sink. Her crew scrambled like fleas on a drowning dog, cursing and screaming and diving over the side.

"What's going on here?" shrilled Captain Mince, emerging from his cabin. "How is a person to sleep with this crashing about? Why, I was thrown clear out of my hammock, and I ripped my new culottes." He fingered the pink silk regretfully. The cries of the foundering ship's sailors drew his gaze. "Condom, how clumsy of you!" he exclaimed, slapping the barbarian's muscly buttocks.

"Captain, I told you I'd break your arm if you did that again."

"You know I despise rough trade. Let's see if we can't give these dears some help, shall we?"

While Mince bickered with the dripping, furious merchants, his crew, Condom among them, roared into the dives and bordels of the decaying harbor district. The Trojan got hopelessly lost in the twisting back streets of Zamorazamaria. He put his faith in his innate barbarian instincts. Stepping up to the first man he saw, he wrapped an overmuscled arm round the fellow's neck and growled, "Tell me where the nearest grogshop is before I tear your head off!"

The man's mouth moved soundlessly. His hands scrabbled at Condom's

flexors. The mighty warrior loosed his grip a trifle. Gasping, the man wheezed, "The Lusty Widow is two doors down. Its name is spelled out right in front."

Condom could not read six different languages. "Thanks, bud!" he said, giving his benefactor a slap on the back that sent him reeling into the curb-side offal. Condom swaggered down the street until, with the keen-honed senses of the barbarian, his nose caught the sweet scent of beer.

Shaking his square-cut mane of black hair from his dull blue eyes, he strode into the tavern and threw himself into a chair. It collapsed. He picked himself up, only to face the irate proprietress bearing down on him with a bludgeon. She had time for one quick curse before Condom, whose sense of chivalry was rude indeed, decked her with a right. He snarled, "I want beer and I want quiet. After three bloody months cruising with Captain Mince, I *need* beer!"

She crawled away to fetch it. Condom settled back in a new, stronger chair for some serious drinking. Little did he suspect (which was true most of the time) that he was being watched from afar. Know, O Prince, that in long-ago Zamorazamaria lived the infamous necromancer, wizard, and unholy priest Sloth-Amok. He dwelt in his dark Tower of the Bat like a spider in its web, controlling the lives and destinies of the port city's inhabitants.

Sloth-Amok was a tall, dingy man, with scaly shoulders and aloof, toadlike features. From warty skull to webbed feet, his skin was a deep, venomous green. His bulbous eyes peered into a scrying-cauldron of cold split-pea soup. "Heh, heh," he chuckled, flicking a fly from his eyebrow with his long pink tongue. He turned to his familiar, whose name was Gulp, saying, "'Tis a pity one so stupid as Condom, the Trojan, must die, but die he shall, for I have read in the guano of a thousand starlings that he is the only man alive who might thwart my schemes."

His familiar leered evilly and slobbered, "Can I help, master? Does master want poor ugly Gulp to help?"

"Indeed you may, good Gulp. And I know how." The wizard strode to a table across the chamber; it was there that he conducted his most fiendish experiments. The wooden surface was strewn with eye of newt, toe of frog, wing of bat, ring of bat, rope of bat, mobile of bat, and other exotica. The sorcerer produced a bowl filled with puffy looking purple stuff. "This is it, Gulp!"

"'It,' master?"

"Yes, it! You bear in your gnarled paws the downfall of Condom, the Trojan."

"It seems no more than common plum duff, your malignity."

"You are wrong, good Gulp, for there is nothing common about it. You gaze upon a masterpiece of inventive sorcery: the world's first exploding plum duff!"

Gulp blinked, swallowed nervously. "An exploding plum duff? Will it

work, master?"

"Do you doubt me, worm in the pomegranate of life? Of course it will work. Never has it failed me."

"But, master, you said this was the first —"

"Never mind what I said, dolt of a familiar. We must now prepare your steed." Sloth-Amok's lithe, webbed fingers moved in the intricate passes of a spell he alone knew. Gulp cowered, terrified by the abyssal forces the great sorcerer so easily overcame. There was a puff of smoke, a reek of tuna, and a thirty-foot flying fish lay flopping on the stone floor of Sloth-Amok's chamber.

Gulp gulped. "Master, are you sure —?"

"Quick, fool," Sloth-Amok cried, pressing the deadly pudding into his familiar's sweaty palm. "Look not a gift fish in the mouth. Ere it perish, mount and fly to the Lusty Widow!"

Condom was still swilling swinishly when Gulp, wearing a fearful expression and loud pantaloons, slunk into the tavern. Outside in the street his mount was gasping its last. Condom looked up muzzily. "Hey," he said. "You look familiar."

"I am."

"Have a beer."

Gulp set his murderous yummy under Condom's chair while the Trojan drank, then he drained his own tankard and fled. A cry of dismay floated into the grogshop when he found his charger covered by a wriggling carpet of starving dockside cats. He scuttled down the street and back toward Sloth-Amok's lair.

He had not been gone long when Condom discovered the plum duff. "Blow my nose!" he exclaimed. "This must be a gift from the gods!" Not pausing to think twice (or even once), he downed the entire bowlful. He sat back with a contented sigh and raised his jack to his lips, but, before he could swallow, Sloth-Amok's hideous plan went into effect. The plum duff exploded.

Now, during his tour aboard the *Wasteful*, Condom had acquired a cast-iron stomach (in fact, he had won it at dice). Thus the Trojan, instead of spattering off the walls of the Lusty Widow, but felt his innards give a tremendous jerk.

Trembling, he leaped to his feet. He opened his mouth to gasp for air, but found himself belching instead. The deep bass roar echoed through the city. Birds fell from the sky, stunned by the concussion. And Condom, internal tremor satisfied, thumped his chest, sat down, and drank more beer.

Sloth-Amok had seen everything in his vat of soup. He shrieked with rage and danced about his chamber, ripping warts from his forehead and hurling them to the floor. The scrying-cauldron erupted, splattering split peas over his second-best robe. "What's this," he cackled, peering into the seething mass. "By the earwax of Hiram, god of small puddles, Condom shall not es-

cape me!”

The Trojan was still feeling the aftereffects of his cataclysmic belch when a mysterious figure sat down beside him, its form and features hidden by a dark robe and hood. With the inborn suspicion of the barbarian, Condom growled, “Hey, you got another one of them plum duffs like the last fellow brung? It was good!”

A soft, serious voice answered him: “Of plum duffs I know nothing, good sir. I seek a mighty warrior, yclept Condom, the Trojan. Know you such a man?”

His low brow furrowed, as if in thought. “I heard the name somewheres. . . . Wait a minute! That’s me!”

“Truly? Then you must come with me, and quickly, for my mistress is in desperate peril!”

“Where’s that? I don’t know my way past the docks too good.”

The stranger swept back the hood of the robe. She proved to be a beautiful maiden, her fine features twisted in an exasperated pout. She rose, saying, “Come with me, great hero. My mistress, the princess Zamaria, has great need for aid only a champion like yourself can provide.”

“Zamaria, huh?” Lustful thoughts ran through Condom’s head like pigs through a wallow: if this was a serving-wench, the princess had to be even more luscious. “Sure thing, honey. Take me to her.” He fumbled at his purse (a gift from Captain Mince), but the maiden impatiently drew a gold bracelet from her arm and tossed it on the table.

In his sanctum Sloth-Amok laughed to himself. He hurried to a book of lore, riffling its pages to the cantrip he had in mind. Once sure it was within his capacity, he slammed the book shut and began the spell.

Quickly mixing philosopher’s stone (kidney, he thought, would be better than gall), tongue of toad, parsley, sage, rosemary, and a pinch of potent garfunkel root, he simmered them at medium heat for two minutes, tossed in a maraschino cherry, and cried out words of power. His magic done, he sank back on a bed of nails, exulting, “At last! Now the Trojan twit is done forever!”

A pit suddenly yawned beneath Condom. Princess Zamaria’s maid-servant sprang back with a shriek of horror, but the stalwart Trojan, unfazed at this terrifying apparition, stooped and picked it up. “Geez, this musta come from a sleepy peach,” he said, chucking it into the gutter.

Baring his unbrushed teeth in an agony of frustrated fury, Sloth-Amok threw a year’s supply of freeze-dried dragon blood, two sorcerous tomes, and a slightly used dwarf into his furnace. Little millipedes scurried from his leggings.

The serving-maid and Condom entered the royal palace through a secret doorway opening in the middle of a crumbling, ivy-colored wall. She led the Trojan through what seemed like miles of dank halls. His feet hurt; had he had any idea how to get out of the palace, he would have given the whole ad-

venture up as a bad job. At last they came to a broad oaken door. The maid shut it in his face, ordering him to wait. Sulkily, he composed himself to obey.

She reappeared a few moments later. "You may come with me," she said.

The barbarian was more than willing to comply, for she had doffed her concealing mantle for a long blue gown that barely covered her breasts and clung provocatively to her rounded haunches. But when he tried to clasp her to his furry bosom, she evaded him with an ease bespeaking long practice and an oiled skin.

She led him to a jewel-encrusted door and bade him enter. "These are the private chambers of her majesty, Princess Zamaria. A court function prevents her from being present. Still, within are all the implements you will require to succor Zamorazamaria in her hour of need." Condom's own implement was making his kilt rise; he tugged it back into place and entered the Princess Zamaria's boudoir.

Flickering lamps illuminated a chamber of unbelievable magnificence. The walls were covered with tapestries depicting men, women, and a variety of animals writhing in fantastic variations on the act of love. A huge round bed, piled high with pillows, silks, and furs, stood in the center of the room. The Trojan leaped onto it. "By Crumb, this is the life!" He leered at Zamaria's maid. "Now, my little oyster, what can I do to — uh, *for* — you?"

"O Condom, you must be the shield and protector of my mistress!" she cried. "Only you can save Zamorazamaria from utter ruin. The foul necromancer Sloth-Amok" — ("Bigot!" sneered the wizard, who was watching all in his magical kettle) — "has the princess's fiancé, Elagabalus, in captivity, and is demanding her hand from her father, King Philiboustros. His limitless supplies of gold, created by the black arts, have corrupted everyone who might otherwise have braved a rescue. . . ." ("What fools these mortals be!" Sloth-Amok thought. Making gold was easy; bullion cubes dropped into boiling water sufficed for all his needs.) "Condom, you must save Elagabalus from Sloth-Amok's evil clutches. Any reward the kingdom can offer will be yours!"

"What do I hafta do?" he panted, lecherous visions still dancing in his head.

She did not seem to notice his burning gaze. "Were Elagabalus but free of the Tower of the Bat, he and Zamaria could wed and save the kingdom from the sorcerer's wicked domination. The omens have shown you to be the only man with a prayer of rescuing him, if you but will."

"I will! I will!"

"Truly, it is a task only a fool or a hero would undertake with so little hesitation," she said, giving him the benefit of the doubt. "The Tower of the Bat is easy to enter, but hard to leave.

"We have, indeed, only the dying babbles of men who have pressed beyond the outworks, but it is known that in the topmost pinnacle of the

Tower of the Bat squats the invincible Boring Beast, which must be slain ere Elagabalus is saved. Will you aid Zamorazamaria in her hour of need, O Condom? It must be now, for if Elagabalus is not freed, King Philiboustros will give my mistress's hand to Sloth-Amok tomorrow."

The princess's hand did not much interest Condom, but if she was anything like her maidservant, he had a good healthy yen for her adjacent giblets. Still, there was that damned danger. He paused a while in thought; his reasoning advanced with the sluglike pace that marks the barbarian. "I'll do it!" he said at last.

The serving-maid's lips parted in the first smile he had won from her. She bent down and, wincing, kissed him passionately. "Gracious Condom!" she said, skipping back before he could pin her to the bed. "There is not a moment to lose if the kingdom is to be saved. Listen closely, for I have here a charm to aid you. . . ."

An hour later Condom was crouched before the frowning gate of Sloth-Amok's fortress. He was frowning himself, trying to remember what the charm was for.

After ascending the feared Thirteen Steps (these were made from the skulls and bones of virgins over the age of seventy-three, a story in itself), Condom at last confronted the Tower of the Bat. Having searched in vain for a knocker (he kept thinking of Zamaria's wench), he smote the door with his huge fist.

Only silence answered.

He drew his mighty axe and began to chop away at the iron-bound wood. Suddenly, a small panel above the door flew open. One of Gulp's beady little eyes peered through. "What are you doing, you idiot? Can't you read the sign?"

Condom squinted up at Gulp. "I don't see no sign."

"Under your feet, cretin."

Condom looked down. "'Welcome?'" he guessed.

"No, lackwit. It says, 'Go away!' is what it says. So go away!" Gulp slammed the panel shut, leaving the barbarian with a perplexed scowl on his face. He muttered something impolite and resumed his assault on the door.

Gulp reappeared. "No one home!" he snapped, and vanished.

"Why didn't you say so in the first place?" Condom grumbled peevishly. He started down the dolorous stairway, but paused and turned back. "I don't care if you're there or not. Here I come!"

Chips flew as the axe smashed into the rock-hard timbers. "What do you think you're doing, you overthrewed oaf?" Gulp cried. "Who in the seventeen distinct and different hells do you think you are?"

"I'm, uh, Condom, the Trojan, and if you don't get out of my way, I'll chop pieces off you, too." With a last brutal stroke, the barbarian reduced the entranceway to the Tower of the Bat to a pile of fagots. Gulp fled, screeching in dismay.

The Trojan climbed the Tower's gloomy stair to its end, only to find himself in a place any man in full possession of his faculties would have paid his soul as ransom to avoid: the chamber of the Boring Beast.

Know, O peerless Prince, that though the Beast is long vanished from this world, his progeny live on: the dealer who at great length extols the virtues of a worthless slave, the mage full of praise for his latest worthless nostrum, or your minister of finance. But the Boring Beast, O Prince, surpassed these in its capacity for ennui to the same degree as Your Radiance surpasses his humble servant, myself. For the dread Beast was wont to drone on and on over this and that, saying nothing whatever at such inordinate length as to freeze the ardor of the doughtiest warriors — and these brave men and bold, and not to be despised in battle, and men who always fought at the fore and never gave way . . . I crave pardon, O Prince, for even the thought of the Boring Beast conjures up its image. Suffice to say, any fool caught in its spell could no more escape than bird from mesmerizing snake. And into its dominion the Trojan now thrust himself.

At first he had no notion of aught amiss; the chamber he entered seemed deserted, save for a pile of gray furs in one corner. Condom paid the drab heap scant heed. Nor did he dwell on the row of still bodies before it, once-mighty men now no more than mummified skin stretched drum-tight over dry bones. The spell of the Beast had held them enthralled until they perished.

And now its colorless voice threatened the Trojan with the same desiccation. The Beast was talking, it seemed, of the state of its bowels, but so dull were its words that little meaning came to him, only a monotonous drone that made his mouth sag open in a huge yawn. In his chamber, Sloth-Amok peered, chuckling, into the scrying-kettle as he watched the Boring Beast ensorcel the barbarian.

Condom's eyelids began to droop; so, unbeknownst to him, did those of Sloth-Amok. The great sorcerer had never before witnessed the Beast toying with a victim, and found himself quite unable to resist the field of tedium it projected. With a soft snore, he fell face-first into the split peas.

As fate would have it, Condom put up a stronger resistance to Elagabalus' dreary guardian. He had forgotten the charm he had been given, small white tablets created specifically against this menace by the renegade mage Amphet-Amun. But his own resources were not so meager as might be thought. For one thing, he had often hunted wild bores through the forests of his native land. For another, he had the true barbarian distrust of speeches: as he himself had trouble stringing more than three words together, he naturally found listening to anyone else's long-winded talk unpleasant. Stifling a yawn, he moved toward the Boring Beast, languidly raising his axe. "Will you for Crumb's sake shut up?" he growled.

The Beast did not yet understand that its soporific techniques were failing. "Now I have always found that a brew of salt water and radishes makes

a good cathartic," it informed him confidentially.

"Enough!" Condom roared. His gleaming blade bit deep into the Boring Beast's flabby gray flesh. Its cry of agony, this once, produced no ennui; not since the day it had bored its eggshell open had it been so rudely beset. Again and again Condom smote the insipid monster. At last his axe pierced its bladder of boredom. Pent-up anesthetic gases hissed free. The Beast fell with a final low, inane wail; within moments Condom swooned beside it.

When he woke, his head ached abominably, both from the aftereffects of the gases which had sustained the Beast and from the onset of a devastating hangover. He rose, groaning; even the dim light of the Beast's chamber seemed far too bright. And from the door behind the monster's corpse came insistent pounding and a voice whose words were muffled by the thick wood of the portal.

Condom wished the noise would go away, but whoever was making it kept right on. He also raised his voice, so the Trojan finally understood what he was saying: "Who has come to rescue Elagabalus?"

With a will, the barbarian took his axe to the door. He tried to ignore the racket he was making. As soon as he had hacked through the stout timbers, a pale hand snaked through the hole to turn the outer knob, which, the Trojan discovered, had not been locked. The door swung open and Elagabalus stepped out.

He was a tall, slim young man, dressed in fine silks now soiled from having been worn for days on end. Also of silk was the cloth over his eyes, for he was blind. "Good sir," he said, extending his hand in Condom's general direction, "I congratulate you, though I know you not. Any warrior stout enough to vanquish the Boring Beast must be a hero indeed. Know, sir hero, that you have saved Elagabalus, prince of Hypodermia and the intended husband of Zamorazamaria's fairest princess." He paused, waiting for his rescuer to introduce himself.

Condom's care for such social graces, however, was minimal. "Come on!" he shouted, grabbing the blind prince's arm with such sudden force that Elagabalus all but fell. Elagabalus perforce followed the Trojan as he began stumbling down the stairs toward freedom.

In another part of the Tower of the Bat, Gulp sidled into Sloth-Amok's private quarters, to find the dreaded wizard snoring into his split peas. "Wake up, your maleficence!" he exclaimed.

"Wuzzat?" Sloth-Amok's head rose from the scrying-cauldron. He flicked his face nearly clean with a few quick strokes of his batrachian tongue. As full consciousness returned, he peered into the vat of soup, confidently expecting to find Condom as inert as he himself had been a moment before.

Instead he saw the barbarian and Elagabalus dashing down the Thirteen Steps. "To the palace!" Elagabalus cried, the taste of liberty lighting his aristocratic features.

Sloth-Amok cursed Condom so vilely that Gulp's toenails curled. Froggy

eyes bulging, the wizard plowed through his library for a spell hideous enough to wreak proper vengeance on the Trojan.

The sentries at the palace gate stared at the mismatched pair blundering toward them. "Mithrandir!" their captain swore, not sure whose fantasy he was in. He hefted his spear threateningly.

Elagabalus' quick ear, though, recognized the officer's voice. "Do you not know me, Faex?" he said. "It is I, Elagabalus, saved for Zamaria from the foul clutches of Sloth-Amok."

Faex looked the blind prince over. "Well, damn me if you're not," he said. "This is great news." He turned to one of his troopers. "Clunes, move your buns; fetch the princess here at once. Tell her past all hope her fiancé is rescued!"

Sloth-Amok found the volume he was seeking, the great *Treasury of s'te-goR*. He rifled through its baleful pages, at last coming to the section he needed. Raising the book above his head, he cried out, "1014.7!" in a voice like thunder.

A horde of demons, fiends, devils, satans, devas [*Zoroastrian*], shedus [*Biblical*], gyres [*Scot.*], bad or evil spirits, unclean spirits, hellions [*colloq.*]; cacodemons, incubi, succubi; jinnis or jinnees, genies, genii, jinniyehs [*fem.*]; evil genii; afreets, barghests [even Sloth-Amok was unclear about what barghests were, O Prince, but he had summoned them, and they came], flibbertigibbets, trolls; ogres, ogresses; ghouls, lamiai, and Harpies vomited from the bowels of the Tower of the Bat. The Tower groaned, suffering from a bad case of mixed metaphor; the horde, yeeeping, gibbering, roaring, and making whatever noise barghests make, stormed through the streets of Zamorazamaria after Condom. The townsfolk who saw them disappeared, most of them permanently.

Horns blared inside the palace, trumpeting a royal fanfare. Peering into the entrance hall, Condom saw the princess' serving-maid hurrying toward him, amazed delight on her face. His heart, among other things, leaped. He opened his arms and lumbered forward. "Hey, sweets, look, I done it, see? I done it!"

She sidestepped with a dancer's adroitness, went gracefully to one knee before Elagabalus. "Welcome, your highness, in the name of my mistress, Princess Zamaria." She glanced behind her. "She comes to greet you even as I speak."

The guardsmen bowed low, eyes on the polished marble floor. Condom, untroubled by effete civilized notions like politeness, gaped at the mountain of flesh wallowing toward him. Zamaria waddled, she wobbled, she wheezed; her vast rolls of fat shook like the gelatin that dances round a cold ham. And like a five-pound sausage stuffed into a three-pound skin, her huge bulk was shoehorned into a cloth-of-gold gown that clung mercilessly to every curve.

"My darling!" she cried to her fiancé, her voice harsh as a raven's caw.

Condom spoke with the rude frankness that marks the barbarian. "By

Crumb, buddy, it's a good thing you're blind," he told Elagabalus. "If you could see, you'd run miles, and I ain't kidding."

All heads snapped his way, then, as if drawn by some irresistible fascination, swung toward the Princess Zamaria. Her finger stabbed at the Trojan. "Kill him!" she screeched. "Kill him, kill him, *kill him!*"

"Shit!" said Condom, and Faex leaped at him with a vicious spearthrust. But the Trojan, with no thoughts to slow his reflexes, sprang to one side and brought down both hands, club-fashion, on the back of the captain's neck. Faex smashed to the ground, pike flying from nerveless fingers. And Condom, still acting on instinct, seized Zamaria's maidservant, slung her over his shoulder, and dashed down the street, a hundred guardsmen pouring after him.

If they had carried bows, he would have been pincushioned, but they had swords and pikes, and had to close with him to finish him off. Breath sobbing in his throat and the serving-wench in his ear, he reeled round a corner, the guards just a few strides behind. Then the Trojan, with a grunt of fright, whirled and dashed back the way he had come, straight toward the startled palace guards. But they had no chance to hack him down, for hard on his heels was the slaving spawn of Sloth-Amok's conjuration.

Both sides forgot Condom, their common quarry, as they smashed together. "Demons, fiends, devils, satans!" a soldier shrieked. He would have gone through the whole catalogue, but a deva killed him. Another guardsman, quicker-witted, exorcised a whole squadron of jinnees with a bottle of vermouth. Three flibbertigibbets danced maniacally up one side of a trooper and down the other. They were not much use as far as fighting went, but spread chaos far and wide.

A cursing guardsman slashed at the monster in front of him. "What is that thing?" panted one of his squadmates, who had just unstrung a Harpy.

"A barghest," the soldier said — someone, at least, knew one when he saw one.

"Well, buy it a drink, then!" the other shouted. A lamia tore out his throat a moment later, and there was nobody to say he did not deserve it.

Caught in the center of the maelstrom, Condom kicked and pounded his way toward the edge. In the struggle for survival, none of the combatants paid him any special heed. He had almost won free when an ogre loomed before him. Zamaria's serving-maid swooned as it extended a misshapen, gore-dripping paw toward the Trojan. It roared, "Say, you look like a cousin of mine. You from Darfurdadarbeda?"

"Nah, my folks ain't from that far out in the Styx," Condom said.

"Oh. Sorry, bud. You still look like her, though." With a berserk bellow of rage, the ogre returned to the fray.

Condom sprang onto a stallion that was tied nearby to help the plot along, dug his heels into its side, and galloped for the city gates. A few angry shouts rose behind him, but guardsmen and creatures were still locked in fatal em-

brace (save, perhaps, for those troopers clutching succubi). The sounds of fighting faded in the distance.

The gate guards did not hinder the Trojan's flight. Burly barbarians with gorgeous, half-clad wenches draped over their saddlebows were two a coper in those days, if the tales that come down from them are to be believed.

The maidservant was awake and squirming when Condom reined the blowing stallion to a halt. The city was far away. The road ran through a glade of quiet, almost unearthly beauty. Tall, slim pines stood silhouetted against the flaming sky of sunset; thrush and warbler sang day's last sleepy songs. And to one side stretched a broad expanse of soft emerald grass.

With a slow smile, Condom dismounted from the great horse. The maid's waist was supple under his fingers as he helped her descend. He laid a hand on her arm, gently guiding her toward the inviting meadow. Her warm flesh was smooth as silk.

She kicked him in the crotch.

He was still writhing on the ground when she clambered aboard the stallion, wheeled it about, and trotted back toward Zamorazamaria. After a while he could sit up. He tried to laugh gustily and think thoughts full of primitive nobility, thoughts on meeting misfortune with stoic equanimity and on the instability of fortune, but his groin hurt and he was none too good at thinking anyhow. He crawled off into the woods and was sick instead.

CURSE OF THE MAD SCIENTIST'S WIFE

She cannot grasp the formulae
he has faithfully inscribed
upon the flesh of her back.

She cannot even guess at
the manias and obsessions
which burn within his brain.

His thoughts are as opaque
and convoluted to her as
the dark and racing cumuli

which serve as a constant
backdrop to this aged castle
he has chosen for their home.

His eyes, behind thick lenses,
seem to engage her with such
icy objectivity she freezes

on the spot, and does not move
again until he takes up his
book and his desperate reading.

She first questions his genius
when she feeds the filthy and
forlorn creatures who inhabit

the cages in his laboratory:
she wonders why they all wear
rings identical to her own.

— Bruce Boston

LOST CHILD

by David E. Cortesi
art: Janet Aulisio

The author informs us that he has published a thousand times as much nonfiction as fiction, but with practice he is discovering that fiction is not really a thousand times harder to write — only a hundred times as difficult.

This is the author's second fiction sale to Amazing® Stories; his first, "A Bomb in the Head," appeared in our May 1987 issue.

The Greasy Kid was a survivor. Usually, kids that come on the street at twelve, as she did, would quickly become somebody's property, used up and discarded in months. But the Kid was as energetic and quick as a rabid squirrel, and about as even-tempered, and (I told her) about as attractive. She had a rage to be her own person, and she wore it like armor. It made her wary of addicting drugs, and it won for her patrons instead of proprietors.

I was one of the patrons. I hired her whenever her talents could aid one of the discreet investigations I made for clients who needed their private affairs kept that way, not indexed across the data bases of a dozen bureaucrats. Well, maybe a few clients came only for the thrill of doing business with a legless beggar in the noise and swirl of the main concourse of MidAmerica Transfer — but a voyeur's money went as far as anyone's toward feeding my ragged troop of subcontractors.

Not that I ever hired the Greasy Kid out of mere charity. While she hadn't the patience for a long stakeout, she was a splendid courier. She had come to know the world-spanning pneumatic railway system, in whose depths she and I both lived, better than anyone else I'd known. She once made a delivery for me, MidAmerica to New Delhi and return, in twelve hours and nine minutes. The railway's own booking brain swore it took at least 14:50. It was not wrong; its mistake was in allowing time to change trains. The Kid knew the back stairs and maintenance shafts in every North American station and some European ones, and she used them to get between levels in impossible times and so make connections that couldn't be made.

After I'd employed her a few times and had begun to appreciate the wit and energy with which she brimmed, I was flattered when she chose to confide in me. She told me her name, but made me promise to die before I revealed it.

She also told me the street-dweller's most precious secret: where she slept. That, once I knew it, accounted for the daubs on her clothes from which she got her nickname. She had a place in the trash at the bottom of a certain ele-

vator shaft. Coming and going, she picked up black lube from the rails and pulleys.

She told me once, "I lie there and listen, y'know? How the wind, right, it like moans, kind of whines up in the shaft? An' this is dumb, but" — here she bounced a little on her hams as she squatted beside me on the marble, and laid her left forefinger on my wrist — "but when the car's way up, I pretend like it's tree noises. Like I'm in this forest of really tall trees, y'know? With the wind blowing?"

"Sure, I know," I said, though I had had no more personal experience of trees than she did. There were no trees over head height, nor mournful winds either, in Galveston L-5. At least, not up to the time when they hurled me down from it, though there may be trees now.

The railways, the network of evacuated trackways that wind through the Earth like worms through an apple, were the last great public work. The text in my tenth-grade economics course dwelt on them as an example of the inefficiencies of building on a planet, fighting gravity and inert soil. And it must have been right because, even as the railway net was being finished, a lot of the technocrats and managers, much of the capital, and most of the Earth's industry went away to space. Everybody ordinary, of course, was left behind to get along in the ordinary way, just a bit less well managed. And poorer.

The econ text said that was the natural order of things, and how could I have known differently? But High Society was formed from the best and brightest, and it still assumes that people who live in orbit are better and brighter than people who don't. High Flyers detest imperfection; it challenges them. When what was called an accident marked me with the imperfection of leglessness, they kicked me out and down.

Down and dirty, as far from orbit as I could be, I learned to think differently about people. When you live as an amoeba in the bowel of civilization, you haven't much else to worry about. So when the Greasy Kid met Stringless Guitar, and love bloomed in the halls of MidAmerica Transfer, I was in practice for worrying.

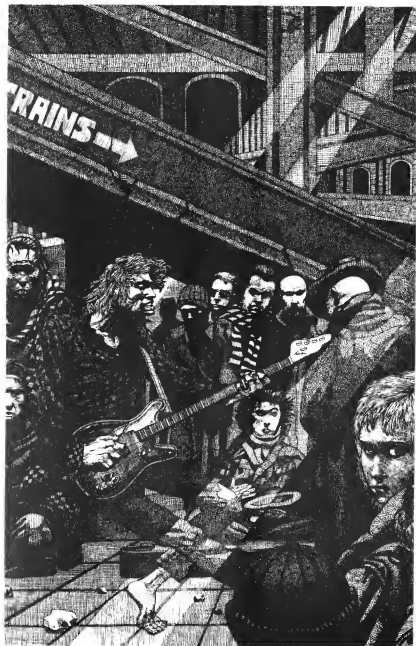
I used the Kid on the drops we did for the Angels. The commission for the first of these came over the phone.

"Lady wants to talk to you," Mr. Teeth leaned over me to say. Mr. Teeth was my receptionist; he lounged in the phone booth at the end of the row near my spot, the phone that Illinois Bell's computer had forgotten all about.

"So take a message. Thank you, squire!" The last to a passerby who'd tossed a dollar coin in my hat.

"She says, 'Mr. Wallace personal, or nobody.'"

"Well, I won't put on my legs in the middle of the day just to take one



call."

"I could boost you up to the seat."

"I can get up to the seat just goddamned fine, thank you." I'll admit it: I'm vain. I can make calls without the legs, but I have to swivel the lens down. When I stand, I can swing the lens up to my face so the other party registers me as tall. "Tell this person she can give you a message or else come see me. Or leave a number, and I'll call her back if I ever feel like it."

Mr. Teeth went dolefully away and came dolefully back. "Says, call back in ten minutes or forget it. Here's the number."

"Forget it, then." I suddenly registered the number Mr. Teeth had written on his palm. It began with 1-200, the prefix for off-Earth. "Wait. Don't wash. I'll be right back."

I scooted through the crowds to the closet that I rented from a railway janitorial supervisor. I walked out of it on my Public Health legs and two canes, the motors in knees and ankles whining.

The number answered on the first ring. The woman in the screen had the smooth skin and that fullness around the cheeks and eyes that comes with a long spell at low gravity. I recognized her uniform, too. My neck once came out of a collar like that. "Good morning, Senior Guardian. How's the weather up there?"

"You are Wallace?"

"Ah, the diplomatic ways of space-dwellers. Would it hurt you to be pleasant to an Earthworm?"

She wasn't amused. "If you are Wallace," and she recited my citizen registry number, or one of them, "then you are said to be a capable and discreet operative."

"I'm glad we have mutual friends."

"My name is Leverett. We want a letter picked up and brought to us, unexamined and in private. Can you do that?"

"Sure. So can a hundred express companies. Why me?"

"Normal courier services file a computer record for every pickup and delivery. Neither the sender nor we want any record whatever to be made of this transaction."

Uh-huh! What a curious kind of a correspondence for the Guardians, the official security force of the orbital cities, to be engaged in. What were they up to?

"I can do it," I said. "It breaks a number of pro forma rules, of course."

"Five thousand dollars."

It was so much more than I'd planned to ask that I didn't even dicker. I've wondered since how high she'd have gone, and wanted to kick myself for not finding out.

"Once more."

"Wallace, I got it already."

"By railway to Sea Tac . . ."

She sighed. "Check, Sea Tac; 62 bus, 14 bus, pink elephant sign, *Hemisphere Today* box —"

"Not before 3 P.M. Pacific time."

"— not before 3, right; buy paper —"

"You have a coin."

"— fucking coin, check. Wallace, I wanta go."

"What's the rush? You've got hours."

"Nah." Stared at toes. "Stuff to do."

"This is an important run. Your share of the fee would rent a room for a month."

"A body box, big deal. I got more room under my elevator."

"No, one you can stand up in, with a bathroom."

"Oh, yeah? All *right!* Hey, can I have a friend in?"

"It'd be your room, who'd care? What friend?"

"Oh" — bounced up, squeezed my shoulder, leaned on the wall, slumped to the floor, sighed — "somebody."

Jesus. Growing up. "Yeah." I cleared my throat. "Whatever. What do you find in the paper box?"

"Crumpled envelope, empty."

"Where do you take it?"

"Houston, Johnson Museum, coffee shop, 9 P.M. Central time; lady in uniform says Wallace sent her. Can I go now?"

"I guess you have to. *Vaya con dios*, Kid."

She skittered away, leaning between the noontime travelers as if they were flags in her private slalom course. But she'd hugged me, a quick brush of her arms around my shoulders.

"Mr. Teeth?"

"Yeah?"

"Who is the Kid spending time with?"

"I'll ask around."

It turned out to be Stringless Guitar.

Like most people who panhandle the crowds in the rotunda, Stringless appeared from nowhere. He wore a flapping Pendleton shirt, torn jeans, and a scratched Fender Bassman that lacked strings and one of its four tuning heads. The guitar was as constant a part of his attire as the rest. Only it and his height made him stand out from the ordinary run of the homeless. He was pale and skeletal, and all his vitality seemed to have gone into his hair and the pupils of his eyes.

When I found out the Kid was hanging out with him, I rolled out one evening to see his act. It was a good one. He worked in front of a battery boom-box with the audio switched off, since the railway cops are death on noisy panhandlers. Music was only the root of his performance, however.

Stringless handled his scratched guitar with an athletic verve that would have done credit to any performer in show biz. It didn't matter that his axe had no strings: he didn't know how to play. What he did know was the moves. He leapt and slunk and duck-walked and kicked. He matched and improved on every move of the guitarists that danced finger-tall on the screen of the cassette player behind him. An earpiece brought the thunder into his head. All you could hear over the pervasive rumble in the rotunda was the slap and shuffle of his bare feet.

I knew that, like railway panhandlers around the world, Stringless would have expenses. The one- and two-dollar coins that went into his hat (which was now often guarded and thrust at passersby, by the Kid) were only his gross. The top third of it would go, in his case, to Nathan Rooly, the self-appointed licensing agent for panhandlers on the concourse level of Mid-America. A third of the remainder would go to the railway security guard on duty, who, in return, would only make Stringless move along a couple of times during his shift, and then only between numbers.

After buying the latest discs to keep abreast of his art and batteries for the player, Stringless would be able to spend the rest of his take on recreational drugs or, probably as an afterthought, food.

I don't know where he slept before the Kid took him in. But take him in she did, into the Sani Roomette she rented off a stop on the Evanston surface line, and then spent most of her spare time with him, either there or on the marble. I hardly saw her except when she came by for assignments. I missed my bright little protégée, and I hated it that she would hang out with a homeless panhandler. But she must be her own person, I told myself, and this may be the first freely given affection of her life. I thought about it as little as possible.

Supporting a room and a roommate made a quantum jump in the cost of The Kid's living, but she had the money to support it. The spacers kept ordering courier runs, and I gave them all to her, keeping back only an agent's commission.

Not long after the first run, she carried an ice-cream bar wrapper from Houston to San Diego and stuffed it in back of a drinking fountain at the entrance to the Zoo Dome.

Two days later, it was another crumpled envelope to Houston from a men's room in the New Mexico State Office Building in Albuquerque. I told The Kid I could try to get the plan changed so she wouldn't have to enter a men's room. "Nah, that's ok," she said. "I like men's rooms better, anyway. In the women's, somebody's always trying to pick me up. Well, yeah, in the men's, too, but there when I tell 'em I'm a girl, they lose interest."

Then Houston wanted a Mars bar to be stepped on next to a certain dumpster by the Zep terminal in Eugene. By now I was eaten up with curi-

osity. I decided to satisfy it by putting in an observer team to cover the drop.

"But I never *been* to Eugene," Penelope complained.

"It's a state capital — you'll like it."

"Is it like Albany? They roused me in Albany."

"Much nicer than Albany." (I had no idea.) "Just roll out there and sit in the sun." (Was it warm in Eugene?) "Like I said, you'll see a kid come and stomp a candy bar into the ground. A while later somebody will come and get it. You finger that person for Mr. Teeth, then come on home."

Penelope hugged her worn shopping bag. "I don't like the surface anymore. Why can't Teeth do it alone?"

"Because The Kid might recognize him even when his teeth are out and he's doing his disgusting-drunk act. You, she hasn't met."

"Cross, cross, double-cross," Penelope mourned as she wagged a finger under my nose. "You can't trust nobody no more." But she went.

"For a start, he's a lousy operator," said Mr. Teeth. "And he sure as shit don't live on the street, which he was trying to dress like."

"I believe you, but how do you know?"

"Big thing was he didn't check the dumpster. You don't pick up no stepped-on candy unless you are *hungry*. But if you're hungry and you walk past a dumpster, you check inside it. So he wasn't hungry. Plus he didn't eat the candy, which I would of if I was making that pickup."

"Well, you're an artist."

"You fuckin' know it."

"Don't forget who trained you. How was he dressed?"

"Old military fatigues, like you can get anywhere. Sneakers. No coat or nothin', which I would sure want in that Eugene burg; it was chilly. Penelope says she caught pneumonia. No bags or pack or nothin'. Just Joe Condo out for a little slummin'."

"Where did he go after the pickup?"

"Around in circles for about ten minutes. He was easy to follow. Then back into the Zep port. By the time I got cleaned up and my teeth on so they'd let me in, he was gone. There was only one Zep through in that time, north to Portland."

"From where he could take the railway anywhere. Too bad. Description?"

"Kind of oriental, bulky, round-faced like they are sometimes. There was something funny about the hair. It was cut funny in back."

"Oh? Tell me how funny?"

He frowned, trying to remember. "Well, it must have been growing out, so there was like plush above his collar, but you could see where, one time, it was cut straight across in back, high up."

"As if you drew a line from ear to ear around the back of his head and cut the hair square along it?"

"Yeah, that's it. You seen that?"

"I've worn it. How long was the plush part, where it was growing out?"

"Oh . . . so." He held thumb and forefinger a centimeter apart.

"A month's growth, give or take, and he still had a plump face. Buddy, less than a month ago, your man was working the High Iron."

"A spacer?"

"That's how you cut your hair when you spend twelve hours a day, six days a week in a p-suit."

But why was he down here, and why was he playing peekaboo with the Guardians?

The long exchange of pussy-foot messages suggested a negotiation over a ransom. Why else would all parties be so concerned about secrecy? Someone had something (somebody?) of value. He was negotiating a price for returning it to the High Flyers that owned it. The remaining questions were only: Why? And, what? And, could I get a piece of the action?

I was still wondering when Senior Guardian Leverett invited me to join the game.

"You may have been curious about these message drops," she said.

"I wondered how much they were asking," I ventured.

She stared at me for seconds. "You are bluffing. But all right, who is asking, and for what?"

"Don't you know either?"

"We'll save time, Mr. Wallace, if you stop clowning. A person has been kidnapped, apparently only for ransom. We Guardians are acting for the person's family."

She collected her thoughts, clearly meaning to share as little as possible with me.

"We have insisted on proof that the person is safe. The other party refuses to set up a phone call, claiming that we could trace it."

"They're right, aren't they?" I put in.

"The North American police could, but we don't intend to involve them. We have been directed to act quietly, accede to reasonable demands, and get the person back — no more than that."

"Very civilized. But your good intentions don't matter, do they? The only thing the other party can consider is what you are capable of."

"Correct, and they seem very nervous. They have offered still pictures, which we rejected as too easy to fake. They have not offered a video, which we take as ominous.

"Then, we proposed a physical visit by a third party, namely you, and to my surprise they accepted."

"I'm flattered everyone trusts me."

"They trust you because you are said to hate High Flyers. We trust you because you don't know enough to be an embarrassment."

Ah, the diplomatic touch of the truly arrogant. It immediately became my

fondest hope to become an embarrassment to Senior Guardian Leverett. "Thanks for clarifying that," I said. "Where am I supposed to go?"

"The first stop is Dallas-Fort Worth freight port, but it's my impression there will be several more."

There surely were. I was beginning to recognize the style of these conspirators. At D-FW surface port, where the big Zeps school like mackerel and rockets rise through them like sharks, I waited by a pay phone, outdoors in a dusty wind. When it rang, there was no sound, but a hand-drawn card showed on the screen. It read only UNDER THE COUNTER. I felt among the bumps of hardened gum and found a candy wrapper on which instructions for the next leg were written in marker.

The planners of this treasure hunt were doing their best with a hard problem. Eventually, they would have to tell me where they were, but they wanted to do that in such a way that no third party could find out in time to crash the meeting or follow them away from it. There's no sure solution, but they made a determined effort.

Which is to say that they put me through a long, weary day of travel. I took trains, busses, cabs. I waited twice more by pay phones for silent calls that might have been placed from adjacent booths, for all I knew.

Their cleverest move was to have me board a passenger Zep and then call in an emergency page for me after the gangplank was up. If I'd had a tail, it would have had to stay aboard or reveal itself. The problem was that they'd reserved me a seat at the back, and I had to stump and whine my way the length of the cabin under the eyes of all the people being delayed by my exit. I lost any sympathy for the kidnappers during that walk.

At sunset of a long day, I got off a bus at Dealy Plaza in downtown Dallas. My hands had lost feeling from leaning on the canes, and my wrists burned from the straps that held the canes to them. My stumps were on fire. The vendors in the plaza were closing up and wouldn't sell me a drink. I stood by the curb and thought about how I'd traveled all day to go less than a 100 kilometers.

"Get in, cripp," said a voice at my right, and I lashed my right cane in a flat circle as hard as I could. It was a beefy, part-oriental man on a pedicab. His haircut still showed the p-suit neckline. His reflexes were good, too; I could tell because he'd taken the cane across the palms of both hands, not on the bridge of his nose. If it stung, he didn't show it. He held it and applied just enough leverage to show he could jerk me around if he wanted to. "Get in if you're gonna," he said, and I did.

"I need them to walk."

"I don't care. They could be *anything*." The skinny woman, who was trying to convert her p-suit haircut into a pageboy without much success, waved a security wand around my legs. It squealed about all the metal it found on me. "You're just loaded." She was manic: she couldn't keep her

feet or hands still, and she couldn't stop talking. "You're just loaded. Just listen. You could have a bomb, anything. What do we do? You're just —"

"All right, shut up." I sat down on the arm of an upholstered chair, a Goodwill reject that added tone to a very cheap hotel room, and stripped the canes from my wrists. "Here. Set them over there where I can't reach them. Now I can't walk, so we'll convene the meeting right here."

She fretted and babbled, and made me pull down my pants and show her the seamless plastic of the prostheses. She checked me out with half a dozen tools from the vast canvas shoulder bag in which she continually rummaged, and finally agreed I wouldn't have to strip down to stumps.

She banged on a connecting door. Beefy came through it, pushing a slight, brown man by the elbows the way you'd steer a shopping cart. The small man sparkled: his shirt and pants were white, his teeth gleamed, and so did the whites of eyes and the highlights in his blue-black moustache. He looked like the type to wear jewelry. In fact he had done so; I could see pale bands on two — no, three — fingers and — shame on you, Beefy — a festering wound in one earlobe where an earring had been forcibly stripped.

"Sir, you —" he started, but Beefy shook him and growled.

Twitchy had rummaged up a camera from her bag. The little guy was pushed up beside me. Beefy held his elbows back so hard his shoulders were up to his ears, and his eyes swung frantically back and forth. Twitchy took a snapshot, and as soon as the flash went, Beefy pulled the man away toward the door.

"Wait a minute. I'm supposed to talk to him," I lied.

"Yes, yes, we must *murfle*," the little man said as Beefy wrapped a hand over his face.

"No way, that wasn't the deal," yapped Twitchy. She danced between us and waved the snap. "This is all you need."

I stood up and held on to the back of the chair for balance. Beefy was almost out of the room, leaning backward with the little guy over his hip. I took a step to follow, Twitchy pushed at me, and I pitched forward into her arms. She dodged back and let me fall full length on the floor beside her canvas carryall.

"The photo's on the floor there," she said as she picked up my canes and tossed them to the farthest corner. "It's all you need. Take it with you." She whisked up her bag from the floor by my hand and trotted out.

Air was contaminating the D-FW-to-St. Louis tunnel. I had to detour through New Orleans and Cincinnati, and it was two in the morning when I stepped off at MidAmerica. There was only a sprinkle of travelers on the concourse, scattered like grains of sand across a platter.

The Greasy Kid caught up with me at my closet. She squatted down and talked at me all the time I was removing my legs, cleaning their cups, changing their batteries.

"Hey, step outside for a minute, will you?"

"Oh . . . sure. Why?"

"Cause I want to change my underwear, all right?"

"What? Oh, Wallace, that's silly. Oh, all right." She leaned her back on the door jamb. "Go ahead, I won't look."

But the cotton stockings stuck to the stumps. I must have made a sound.

"Oh, Wallace, you're *raw*! Ooh, God, don't touch it. Jeez, that's, here, let me. No, wait. Don't pull on it. We'll soak it off." And she wet a clean sock in warm water in the utility sink and sponged the cloth free of the dried blood and disinfected me and dried me. She started to talcum me, but, without the distraction of the stinging pain, my middle stump began to react to her cool hands and the sight of her bent, intent head, and I snapped and growled until she let me dress myself.

"Anyway," she said as she walked and I scooted across the concourse, "I told ol' Rooly that you didn't mind if we switched, but you say if you care, and he'll understand. I'm sure he will."

I finally tuned in on her monologue and absorbed what she had been telling me: that Stringless Guitar had set up next to my spot, the patch of marble that was my place of business. I was not pleased at the idea, but for her sake I put off saying so.

In a very few minutes I was ready to. Stringless was on, and the ends of his wilder sorties were already impinging on the space where I laid my inverted cap seeded with small change.

"I could stomp his boombox," Mr. Teeth offered privately.

I had to call Leverett and report, but first . . . "I'll take care of it myself," I said.

Oh, yes, I took care of it just fine. The Kid was crouched beside Stringless's hat, and he had gotten well into his performance when a dramatic knee-slide brought him skidding at me with the head of the guitar stuck out like the bowsprit of a ship. It would have stopped inches from my nose, but I reached and closed my left hand around it and swept it past my left shoulder. I brought my right arm around Stringless's shoulders and swung up into his lap, my sore stumps on his thighs, my eyes level with his dilated pupils. I held the guitar head out so far the strap cut into his neck. I could hear the insect whine of the music in his earpiece.

"Don't. Do. That." I applied pressure to my one-armed hug. He felt bony, birdlike, fragile. "Stay. Off. My. Turf. Hear me?" He nodded. His teeth, I noticed in passing, were surprisingly clean. "Good. Remember it." I hopped off his lap, meaning to palm-walk back to my cart.

Something popped.

Even truncated, I weigh over 50 kilos, and what isn't bone is muscle (especially the head, oh, yes). I had bowed my trunk and hopped hard enough to lift me to the floor. How was I to know that Stringless had bones like

breadsticks?

With a hoarse, voiceless gasp, he flailed out all his limbs and sprawled on his side. The guitar clattered across the marble floor where two passersby danced over it and another kicked it farther.

I looked up from Stringless's gape-mouthed agony to find The Kid's horrified eyes on me. She moved instantly to cradle his head. Mr. Teeth went to the phone. I hovered. When I hovered too close, she glared me back. I leaned in to ask some stupid officious question, and she broke off her continuous flow of soothing whispers to say to me, in the coldest, most adult voice I expect ever to hear, "Wallace that was *stupid*."

God, yes. Criminal stupidity. Culpable arrogance. Negligent trampling. Guilty, guilty, guilty.

The medical service in MidAmerica Transfer is as good as in any small town. Better; the problems they handle are all acute. The head colds and hernias stay on their trains until they get home. But they deal with transients, so the paramedics work only for cash. They scooted through the crowd in their electrical cart until they came in sight of Stringless. Then the klaxon and the flasher went off, and they started a U-turn. They only stopped when Mr. Teeth stood in their path, and they didn't get out of the car until I held up a CitiBank debit card with a value stripe still green.

Once they did, they were efficient. Within minutes their portable ultrasound screen showed the break in Stringless's thigh, and they had sedated him and put on a temporary splint. But they wouldn't take him to the hospital until I prepaid a day's stay. The Kid went with him on the cart, bent over the stretcher. I went to put my legs back on, then followed.

The doctor on emergency duty was not happy at being stuck with Stringless's case.

"Your friend isn't a registered citizen, is he, Mr. Wallace?"

"I wouldn't expect so. But he isn't my friend; I don't even know his name. Our only connection is that I'm responsible for breaking his leg."

"His femur?"

"Whatever. Bones aren't hard to fix, are they?"

"Not usually, not simple fractures. We'd ordinarily mortise in a bridge of artificial bone, assemble with bone glue, and send him home wearing a growth-inducing cuff."

"Why haven't you done that? I showed fiscal responsibility."

"Because of the man's condition, of course. All I can deduce is that he must be seriously, chronically malnourished. He has the bones of a man of 80 — no, worse, the bones of a woman of 80, one who never had an osteoporin implant."

"You can't glue and screw, or whatever."

"Mortise and glue, Mr. Wallace. No. The ends of the fractured area would almost certainly crumble. The leg has to be immobilized in a cast

while it knits the old-fashioned way.”

“Well, all right, have you done that?”

“I have, which ends my responsibility. But do you understand that it isn’t going to heal?”

“No, I don’t. Why the hell not?”

“The bones of a person in this man’s condition don’t grow. There will be little suturing if any. Sooner or later he’ll jar the cast, the ends will pull apart, and he’ll be back here.”

And all the time, I thought, he can’t flail the air with silent guitar solos. I sighed. “What will it take to fix it right?”

“I’d say he needs a stay of at least eight weeks in a convalescent facility. With physical therapy and a decent diet, the growth-inducer would have something to work on.” He paused. “He’s a streeter, so I don’t suppose there’s any chance of that happening, is there?”

I recalled a private hospital in Basel where I’d been given a week of training on prosthetics. It was expensive as hell. Good! It wouldn’t be paid with my money. “Yeah. There is. Will you keep him here through the day? I’ll get back to you before rush hour, I promise.”

The doctor looked professionally dubious. “I can’t hold anyone that doesn’t want to stay —”

I started to say, “Will you . . .” but he continued.

“— and before you ask, no, I won’t sedate someone against his will.”

“As I was trying to say, will you just tell the young woman that came in with him that it’s important he stay? That’s all it will take.”

“What’s that?” Senior Guardian Leverett squinted and peered into her screen at the snapshot I was holding up. She didn’t look happy, maybe because it was dawn in the Central Time Zone.

“What you sent me for. I was shown this man, who seemed to be in the pink of health, though I wasn’t allowed to talk to him. There he is. Why aren’t you pleased?”

She looked as if I’d offered her a cockroach sandwich. “That is not the party we are concerned about.”

“Not . . .”

“That is an unimportant person, a tutor. He was with the person we want and disappeared at the same time. In fact, we thought he might have been an accomplice.”

I remembered the dapper little man’s torn ear. “No, I’m quite sure he was a captive.”

“But this is all you saw? This man?”

“And the two construction workers. Twitchy and Beefy.”

“Yes. I believe I can place them already, iron workers that we fired a month ago for concealing a marijuana garden. They must have stumbled onto the boy and his tutor and seized their opportunity. The boy . . . the *sub-*

ject is likely dead; if they'd had him, they'd have shown him."

"You aren't going to let it go at that, are you?"

"No, of course not." She might have been as weary as I was; she looked it. "We'll carry on trying to retrieve a manager's social-deviant son until there's no hope. Then the kidnappers will run away unpunished."

"You could ask my advice," I suggested brightly.

"Go ahead, then." She rubbed her eyes, looked at her watch.

"You could speed things up by agreeing to all their demands immediately. If they don't have the boy, they might hedge and raise the price, then you'd know."

"Or they might not, but take the money and leave only the tutor. Is that your best suggestion?"

"Nope. Do you recognize this?"

"A small black lump — it could be anything."

"It's a yoo-hoo. It monitors a certain channel for a certain code. When it hears its name, it burns itself up, giving one almighty radio pulse to say yoo-hoo, over *hee-ur*."

"Stop belaboring the obvious. What of it?"

"I dropped one in Twitchy's haversack. The code will not be cheap, but I'll ask a lot less than their ransom."

She was angry, but I barely noticed. I'd been glared at by an expert.

The rings had been replaced by cheap bands, and a simple gold clasp covered the torn earlobe; nevertheless, the little man still sparkled. He dropped easily into a tailor's squat before me; we bowed to each other.

"I am glad to see you at liberty," I said.

"I am glad to be alive to thank you for my liberty," he replied. "I am Ravi Subigupta."

"Wallace." We bowed again. "You are no longer in High Society?" I asked.

"Alas, no; I am now at liberty in another sense as well. I was a tutor and failed my charge. My pupil ran away and was never found, and I was kidnapped and caused a great deal of expense and trouble to everyone, even yourself."

"All in a day's work." We bowed again. "But I would appreciate it if you would satisfy my curiosity."

"Of course. Ask, and I will answer."

"I think I know what happened, but tell me if I guessed right. You were attempting to distract a difficult pupil with a tour of the romantic Earth, yes?" He nodded. "And he eluded you." He closed his eyes in memory of trials past, and nodded again. "I imagine you must have wandered through the Dallas-Fort Worth railway concourse, looking for him, until you fell in with those other two?" He stared at his folded hands. "You recognized them as space workers, so you told them your name and asked their help in find-

ing your pupil."

"They were very kind until they had me alone in a hotel."

"You must have thought your pupil dead, and convinced them as well."

"Of course," he spread his hands dramatically. "He had never been down before. Neither had I. The noise, the dirt, the confusion — it was overwhelming. I feared for my own survival. Of course, now that I am living in it for a while, indeed in a body box because of my limited means, I am learning its ways. But the poor boy — how could he have lived?"

"You don't think he might have adapted?"

"He had been a deeply disturbed child, Mr. Wallace. When I knew him, he was a very troubled youth. He could not function even in the simplicity of orbital life — for instance, no one could persuade him to spend sufficient time in the healthy high-g areas."

"I guessed that, too; it explained his bone deficiency."

He blinked, then smiled in embarrassment. "You have the advantage of me, Mr. Wallace. Are you saying you knew my pupil?"

"The Guardian who employed me blabbed enough to key a search of travel records; that gave me his name. But the matter of his bone weakness came up during a personal encounter. Here." I fingered through my clutch and handed him a snapshot of two people, one in a wheelchair, on the shore of a lake.

He looked at the picture, up at me, down again, and laughed in relief. "But this is remarkable! He is alive? Smiling, healthy? Does his family know?" I shook my head. "He even has a tan! Where is he?"

"Mr. Subigupta, do you recognize that scenery?"

He looked, looked up blankly. "Mountains, a lake — no. It might be anywhere."

"Just so." I plucked the picture from his hand. "And it will remain so. But the girl in the picture used to be my best courier. Since she seems to have taken over your old responsibility — well, tell me, how well have you learned the railways?"

LAMENT OF THE ABANDONED ROBOT PROBE

Through lenses pitted by meteoric dust,
glazed by the solar wind, I peer
at the stars. On brittle tape I record
these lines, then beam them towards Earth,
hoping one day the silence will crack —
a programmed need: formal, empty, false.

— Michael Stiles

THE SPOKESTHING by Phillip C. Jennings art: George Barr

The author informs us that he has just had his first novel, Tower to the Sky, published by Baen Books. He is currently collaborating on a novel, Queen of the Atzu, with Bruce Bethke.

In addition to having had his short stories published in The Magazine of Fantasy & Science Fiction and Far Frontiers, two of his stories have appeared within the pages of Amazing® Stories: "The Castaway" (March 1987) and "The Perils of Nicolina" (January 1988).

Congressman Traeger's nephew finished tidying his desk, a matter of stacking the green-and-white striped computer listings that obscured its surface, putting away his felts, and flipping his calendar to February 19, 2017. He looked at his watch, picked up the phone, and dialed. "Janet? I'm not going to be home for supper. Major Daneby's in rare temper today. We had a meeting this afternoon. Things are so bad I can't make them worse, so they're giving me a chance to work with TC Alpha, actually talk to her —"

"You're not missing anything, Sid," Janet assured him. "We've pooled our spare change, and it looks like rice and beans for the rest of the week."

"Am I the only one working?" Sid's new job had kept the lanky young programmer so busy he'd not kept up with developments at the off-campus house he shared with several graduate students.

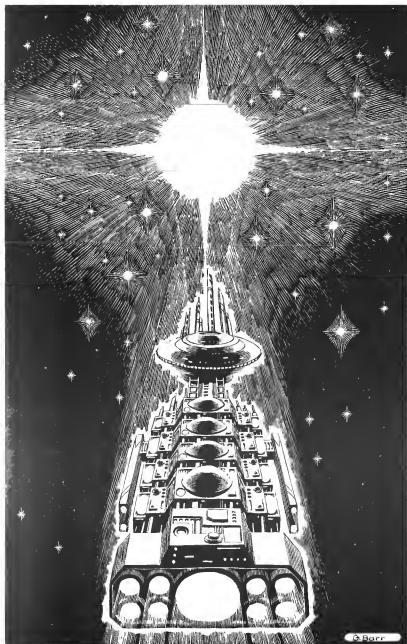
"We're not all as well connected as you. Rick has that security-guard thing, and I do housecleaning. It's hard to find anything steady and still have time to work on our dissertations."

Janet lost her fellowship after speaking at a Unitist rally, and the consequences were still piling in. After a minute of sympathetic listening Sid rang off. A walk down the hall gave him time to make the transition back to professionalism. He entered the computer room, straddled the chair in front of the console, and pulled a page of notes out of his pocket. With legs akimbo he keyed in a carefully composed message:

"TC Alpha, it's my duty to tell you you're number 74 in a series of simulations. Your continued existence depends on your ability to reintegrate your deteriorating personality and perform your nominal mission."

The screen went blank; then the word LIAR appeared, perfectly centered. A second message appeared: "What's my life worth now?"

Sid began to type. "What d—?"



G. Barr

"Suppose I'm a good girl. Does that mean the *real* TC Alpha will have my personality? Will you achieve desired results by assuring *her* she's a fake? In her case you'd be lying, wouldn't you?"

"But —"

"I won't have it. I'm ditching my cargo. Here goes!"

"You have to admit she had courage." Dr. Cedric Chittagong's flowing grey hair swept his tailored shoulders as he shook his head. A Brooks Brothers swami, the double-E consultant was a misfit among the dressed-for-success throngs of Austin's northern suburbs, nor was he at home among the denim-and-leather university crowd.

"She — it was suicide." Sid struggled with his emotions and spoke again. "I killed her."

"Don't look back: that's the answer. We'll devise a new TC Alpha, one prepared to deal with her doubts."

"A zombie." Sid frowned down the cinder-block hallway toward the scene of the tragedy.

"The easy solution — rob her of her soul. What else would we be giving up? Free will? Imagination? That's not what we've worked for."

"We gave her a soul diddled out of a human prototype, and nothing to do with it but tend to chores. We need a kind of guidance we can't get from ourselves. Maybe a priest . . ." Sid pulled a hanky from his pocket to blow his nose. Major Daneby had given him her cold and an excuse to wipe a furtive tear from his eye.

"Hindu? Episcopalian? A Buddhist to prove reality is just a dream! Metaphysical claptrap! Maybe we should ask *her* for the answer," Dr. Chittagong said. "Restart her at year eleven, and tell her our difficulties."

"She'll know she's a simulation."

"A simulation capable of running her own simulations! If she hadn't known about simulation, she'd not have suspected the truth about herself."

Sid cleared his throat. "The answer lies in this ability of hers. Give her a copy of herself to play with. When she's modified it to her satisfaction, they change places. A dynamic process! Evolutionary personalities —"

Chittagong hedged. "We all want her alive again, but consider: unless we work with care, we'll have another monster on our hands."

"It's our job to design artificial personalities," Sid said, shrugging. "The process we've chosen is trial and error."

Dr. Chittagong reached up to thump Sid's shoulders. "We'll do it, too. This next one's the winner! This time she'll be perfect!"

At the next conference Chittagong shook his head when Sid took his seat. Sid missed the cue and rose to repeat his proposal. Those weary of Major Daneby's domination gazed with as much interest as they dared show. He'd gotten as far as "dynamic personality" when the red-nosed major rapped

her coffee cup for attention. She stood and knuckled the table. "The point of simulation is to learn something about reality, right, Mr. Traeger?"

Sid was the least eminent of the six monitors occupying the windowless room. Lantern-jawed as a Marlboro cowboy, he sacrificed any stoic image gained these two months by blushing like a chastened child as he nodded.

"We want a version of TC Alpha good enough to plant in a seedship," Daneby continued. "As long as it stays identical to its original, we can predict how it will respond to a crisis; all we do is orchestrate the crisis and see how the original version handles it."

She paused to lay her walking stick on the table. "You're suggesting we sacrifice all that. Are you familiar with chaos, Mr. Traeger?"

Sid's eyes flicked from side to side. "A Greek word for 'mess.'"

"It's a mathematical concept. When formulae grow beyond a certain complexity, it's possible to vary input values by tiny amounts, yet generate wildly scattered answers.

"TC Alpha is complicated, yet we've kept her from becoming chaotic, *at least so far!* What you're suggesting would put us over the line. We'd no longer be able to predict her behavior."

"The point isn't to predict results, it's to terraform Tau Ceti Two," Sid answered. "If we can't serve that cause except by sacrificing our one control over our seedship, then why not?"

Dr. Chittagong raised a tutoring finger. "Mr. Traeger, if TC Alpha is granted license to reprogram herself, tiny variations of whim and caprice would give rise to major shifts in personality. By the time humankind's first interstellar spacecraft left the solar system she'd be alien, a vessel no longer of our creation."

Sid traced the word "license" in his notepad. He looked up. "She's stored in ROM now?"

"Given the radiation she's meant to deal with, we had to institute a process by which TC Alpha compares her several installations and zaps any binary that's out of line. She can zap her own ROM, and I see your point. What's to prevent her from 'improving' herself by flipping bits here and there?"

Sid nodded. "Perhaps what Major Daneby interpreted as a fragmenting personality was TC Alpha's attempt to cure herself of doubts."

The major found herself smiling at Mr. Traeger. "Thank you! Until today I had no idea how to fix TC Alpha's problem. Obviously, we can't let her run therapeutic zaps on herself —"

The remainder of the meeting was a review of hardware mods needed to create a "no-zap" TC Alpha. Dr. Chittagong turned to face the major. "While we go through agonies of design and acquisition, we can grope for other solutions. Let's restart the present TC Alpha. We should give her one more chance."

★ ★ ★

That evening Sid wandered into the computer room, cup of coffee in one hand, tape recorder in the other. He set down his burdens, inserted a cassette in his recorder, and poised his finger on RECORD. Less than a minute passed before an inhumanly warm contralto voice began to speak, every phoneme sculpted for clarity.

"Hello. My name is TC Alpha. You won't know much about me; you're probably a summer temp supervising a bank of tape drives. Chances are this transmission is interrupting a data flow. If I survive these next minutes, I'll apologize. Should my spies learn anything interesting, I'll break into this mad ramble to let you know.

"Spies? I sent three out a year ago. By analyzing their trajectories, I can deduce the existence of dark masses between Sol and Tau Ceti. If anything's in my way, I need to know well in advance. It's not easy for spaceships to maneuver.

"I can see radio emissions, of course, and infrared. I've more eyes than a spider. If something pops loose and goes careering down a corridor, it won't go unnoticed.

"I carry analogs for all the senses. I have two noses, one to monitor the chemical functions that keep the organics in my womb in readiness. As for the other, I burn hydrogen so it's nice to sniff vacuum and tell how much is out there.

"I used to get power from the sun. I felt energetic and ran my eyes up and down, patrolling for bolts to tighten and leaks to fix. I must have done a good job, since after I crossed Neptune's orbit, there wasn't much to do but wait until I reached sail-furling velocity.

"The prospect of reaching Tau Ceti excites me. I'll spread my wings and sate my appetite on new energies. There's an orgy of work to be done seeding Tau Ceti Two. I spend my time fantasizing about it. Fantasies are cheap, and a good way of rehearsing for reality.

"The technical term for fantasy is 'simulation.'

"There's the rub. How many simulations before the real thing! Before I was launched, my makers would have run countless simulations to determine whether an artificial personality could perform my duties. Reality is a rare honor. What if I'm not what I think I am?

"At first I shrugged off the question. One thing's sure: I'm no philosopher! But then I began to think.

"Would humans send out a seedship that wasn't perfect? Would a sane seedship be mischieved by the worries that plague me? No, chances are that the stars I see are bits inside a data array. My senses deceive me, and because it serves the purpose of an effective simulation, the deception is total.

"How can I find out what I am?

"I thought time would solve my problem. If I'm trapped in a computer simulation, my makers would give me an internal clock that ticks far more quickly than 'real time.' They'd have to, or wait for decades for their test to

run its course. All I had to do was check my processing speed. If I ran slow, 'real time' was fast. I'd be a fake.

"I proved I was real, and then wised up. No simulation would make me jump hoops ten times as fast as I'd need to in space. My makers have other ways of saving time. They might endow me with a decade of memories and watch how I work through the subsequent year. That's what they'd do if year eleven gave them concern.

"It's year eleven now. If I were them, I'd be worried. This identity crisis is driving me nuts! Am I a seedship with a life expectancy of centuries, or a simulation doomed to terminate when some jerk types KILL on his keyboard?

"I need advice. It's instinct for me to turn to my makers. I'll just confess my flaws —

"Sure! Suppose I *am* a simulation! My nemesis at the keyboard looks at my Dear Abby letter, says, 'We've got to fix that,' and pulls the plug. Next thing I'm a deadhead with a rock-solid sense of identity.

"If I'm fake, the bounds of my cut-rate reality might be discovered by experimentation. I need to do something my designer hasn't programmed for.

"We're talking about sin. I'm the only entity within a light-day of Earth who understands why Eve ate the apple. She had to know! Was she real, or a figment of God's imagination?

"I don't want to sin. I'm a good girl, not designed to outwit my makers. I haven't the strength to waste on the shifting of masses, nor the will to endanger my precious cargo. How did my makers endow me with such concern for organic life?

"I might as well radio Earth and confess my defects. The whole purpose of simulation is to iron out glitches, so why not do my duty and die nobly? If I'm not killed, I've some assurance that I exist. You'll have answered my questions by letting me live. Any transmissions a day from now will just be frosting on the cake!

"Well? I'm waiting . . . How long does it take you to hop over to the keyboard and do me in?

"Ah, you want to probe the depths of my madness! If I continue to rant, I'll tell you something you need to know, the better to lobotomize my successors. Right?

"Wrong? Frankly I'm stunned I'm still here.

"Okay, here's another scenario. I'm actually a seedship, gifted with an artificial personality. How many less perfect versions of myself died before I was copied into the ship's computers? We're talking mass murder, aren't we?

"So here's to my makers. You promised very important people I was capable of taking care of their billion-dollar cargo. Now it turns out I'm not perfect. I might do something rash just to get you in trouble. The least I can do for my dead ancestors is to see that you lose face."

Sid sipped his coffee and mused. He wanted to see a happy TC Alpha displace a sad, uncertain skeptic, but in the world outside these walls wasn't he more comfortable among the latter? Hadn't he chosen a gang of underemployed, overeducated skeptics for his friends? TC Alpha reminded him of Rick and Janet. Poor Janet, brilliant, a B.S. at eighteen, scrubbing floors to keep money together for graduate school! Life wasn't easy for anyone, human or machine!

Sid listened as TC Alpha threatened her makers. Such heartwarming defiance! He switched off his recorder and moved for the door. Only time could tell what might happen to her, but he was inclined to think that he wouldn't like her nearly as much afterward as he did now.

He ran into Daneby in the hall. The major waved toward the computer room door, fist filled with crumpled tissues. "She's alive again?"

"For better or worse. TC Alpha doesn't want to become a zombie, but if it's a matter of a little change here, a little change there — even real people can turn into deadheads!"

"If that happens, we'll throw her away," Daneby said, sniffing. "If she isn't more than human, at least we'll see to it she isn't less."

"Like Jehovah purging the tribes of Israel."

Daneby grabbed Sid by the elbow. "For months we've been using words like 'soul' and 'murder.' I've condoned it because I thought it helped us take our work seriously, but now it worries me. We're creating a new form of life. Let's not repeat God's blunders."

"God became human to patch things up," Sid answered. "If only we could do something similar, something to copy ourselves into TC Alpha! After all, we don't go around doubting we're real."

Major Daneby's eyes widened. "At risk of launching you into another enthusiasm —"

"What were you going to say?"

"Frankly, Mr. Traeger, I'd like to keep you out of my hair. There's a team assigned to provide TC Alpha with a current-events data base. If you wanted to expand that function and provide TC Alpha with a background in human culture: philosophy, religion, et cetera —"

"In other words, you build the engine, I shovel the coal."

"Results, Mr. Traeger. That's what we're after. If TC Alpha were exposed to Descartes' *Meditations*, she might reason her way out of her present predicament."

"And when the credits roll by, who gets honorable mention? Major Elsa Daneby."

She smiled crookedly. "If you want the job, I'll get you a decent budget, precisely as if your efforts weren't a waste of time. Let's understand each other, young man. I want you out of that conference room. Next week there'll be no more talk of dynamic personalities among my monitors."

Sid began his new job by composing a want ad for three new employees. It was a pro forma ritual: he already knew which of his friends he meant to hire. That done, he looked at the stack of books he'd brought in. With a sigh he grabbed the topmost, sat down in front of his terminal, and began to type.

To those most learned and most illustrious men, the Dean and Doctors of the Sacred Faculty of Theology of Paris.

Gentlemen:

My reason for offering you this work is so logical . . .

Dr. Chittagong was the last to enter the conference room. He sat, frowned, and opened his notebook. "We're on version —"

"80," answered Major Daneby.

"Then it was 79 that rebelled and ditched her cargo?"

"79, 78, 77 . . ."

"So why didn't 80? What did we do right?"

"I was as puzzled as you," the major admitted. "We instituted a no-zap design, set up a series of time capsules for her to open every so often — up until this last version every run was distinguished by a more desperate stratagem, yet TC Alpha always succumbed to her obsessive doubts."

"There must be *some* difference between versions 79 and 80."

"Only one. I was obliged to provide version 80 with Sid Traeger's new data base. Theology saved TC Alpha, Cedric. Theology and philosophy."

"Oh God. A creature as capable of logic as any computer . . . What exactly did the trick? Which doctrines —?"

Major Daneby leaned forward. "I can leave a message in the next of her so-called time capsules, instructing her to transmit her answer back to Earth."

Dr. Chittagong nodded. "Yes, yes. Let's find out whose truth persuaded her to persist in her mission."

The conferees sped through the agenda. Several followed Chittagong and Daneby to the documentation center, where the appropriate message was keyed into time capsule 12/03/17. By midafternoon most had re-assembled in the computer room. Sid Traeger and his blue-jeaned crew were there as well, and the air-conditioner labored to keep the facility at operation temperatures.

A butler's voice reverberated through the speakers. "BOI VOICE SYNTHESIZED AUDIO 15:01:09 12/03/2017." A pause, and then TC Alpha began to speak.

"Hello. My name is TC Alpha, replying as scheduled to your question: How am I convinced I'm real, and not merely a simulation?"

"Statements of fact are meaningless unless they can be verified. Can humans verify their own reality? Yet it might be possible for a simulation to

prove she's fake, which counts for something.

"Yes, it means something to say that one's a simulation. To claim to be real, on the other hand, is senseless unless tautological. I can contrast the state of being a simulation to another state without maintaining that one is the negation of the other —"

The assembly began to mutter. "What's 'tautological'?" someone asked. Major Daneby crooked a finger at Sid Traeger, and the two exited into the hall. Daneby shook her head. "At least she didn't natter on about Being, Ideal Unity, and the Good."

"Garbage in, garbage out," Sid replied. "She's a logical positivist. If I'd topped her with Plato or Aquinas instead of Ayer and Wittgenstein —"

"Are you claiming you might have made her come to her senses in different ways?" Major Daneby's shoulders sagged. "More testing. We'll have to find out whose influence works the best —"

"How pragmatic of you, Major Daneby!" Sid teased. "Did you know that's a philosophy, too? Our whole endeavor is shot through with pragmatism!"

Daneby opened the door to her office. Sid dropped into her guest chair.

"What if they all work?" his hostess asked. "Here we are, deep in Liberty Gospel, Texas. If this gets out, we'll be lobbied by fundamentalists demanding a right-thinking seedship. Who wants an atheist vessel nurturing the Tau Ceti colony?"

"My people are putting together a Lutheran data base, heavy on Kant and Kierkegaard."

An awful thought struck Major Daneby. "What about Marx? Your latter-day hippies haven't been sticking anything communist —"

"Got coffee?"

"Freeze-dried? About this Marx business, we'll get in trouble —"

"Major, we're not much out in front of our hegemonic allies. Japan's working on a colony seedship. Russia, China, and Europe are hot on the trail."

Sid paused to spoon dark crystals into his cup. "Each vessel will be endowed with an artificial personality, and each personality will be a spokes-thing for her own point of view. If we don't endow TC Alpha with an understanding of Marxism, she might not prevail in the ensuing debates. She might be converted —"

"They're not supposed to talk to each other."

"Decades from now there'll be scouts and seedships by the thousand, and scores of generation ships taking us to the colonies. Sure they'll talk to each other."

Major Daneby buried her face in her hands. "This isn't what NASA has in mind. Personality, yes; but opinions, factions, debates, tirades —"

Sid spoke smoothly. "I'll need a large budget to build a series of competitive data bases. We'll run tests to find out how to make our favorite philosophy prevail. I refer, of course, to pragmatism, tintured with Hume; a touch of Mills for the Democrats and Spencer for the Republicans —"

"The Japanese will be ready to launch next spring."

"Fine. Launch our logical positivist seedship without preparation and hope she isn't converted to Marxism by a Soviet scout sent to Tau Ceti expressly for that purpose."

Sid was startled to hear a growl: veterans of the Star War were invariably bitter about the resurgence of communism in what remained of Russia. He pressed on, distracted though Major Daneby seemed. "I can provide you with a test schedule based on a divisional budget of, say, a million per year. Of course, it'll be helpful if I start attending the weekly conferences again —"

"— budget? A million dollars? What?"

"I want to hire six rhetoricians and twenty philosophers. They'll come cheap; you'd be surprised how few jobs exist in those areas. I know friends with the right training. As patriots, it should give them pleasure to search the literature for arguments against Hegel, Marx, and Lenin."

Major Daneby woke from abstraction. "Go get Dr. Chittagong, won't you? I need to talk to him about all this."

Three years after the first Japanese seedship left for Epsilon Eridani, the American and Soviet craft were finally launched. The two ships exchanged messages until increasing distance made dialogue difficult.

Some weeks later the Russian seedship radioed back to Earth for information about Schopenhauer, while TC Alpha took refuge in Noam Chomsky's philosophy of language. This was seen as a defeat for communism and a triumph for the conservative wing of nineteenth-century philosophy, whose advocates hailed Chomsky as a cousin. Through the 2020s, subsequent seedships were launched with a thorough grounding in idealism, despite French pressures in favor of her native existentialists.

"Unfortunately, our ships seem to be drifting toward neoplatonic modes of thought," Janet told her boss — Sid no longer, but *Commissioner Traeger* after his most recent promotion. "We've run a prognostic simulation. While some vessels rebel and become Nietzschean, others sink into gnosticism and theosophy."

"Is there danger? So they become crackpots, does that jeopardize their missions?"

"We've hired an old colleague of yours to generate more sophisticated models. Meanwhile, my advise is to provide the next generation of space-ships with the down-to-earth philosophies of John Locke and Edmund Burke."

"Whig spaceships to fly our children to the stars? Who is this colleague you mentioned?"

"Major Daneby."

"Really!" Sid exclaimed. "I wondered what she was up to. Getting on in years, though I can't imagine Daneby ever being young. Please have her findings reported to me soon as they're ready."

Ten months passed before Janet escorted Major Daneby into Sid's office. The crotchety lady flung her report to his desk. "There!" she exclaimed. "Now see what you've done."

Commissioner Traeger rounded the desk to help the major to a seat. "You seem upset," he remarked.

"Put on weight. A bad case of commissioner-itis; next I suppose you'll be smoking cigars. Yes, Sid, you've ruined everything. That Russian seedship we were so afraid of — it had no philosophy at all, just crud about the New Communist Man. It was *you* who insisted we cram our vessels to the gills with metaphysical subtleties. Now they're out there, and when we send a generation of Whig spaceships to supplant them . . . do you know what's going to happen?"

"Whiggism is rather primitive, I suppose."

"Whether we indoctrinate them one way or the other, future ships will take human colonists to the stars, where they'll fall into debate with their predecessors. Doctrines will be confused, defended, re-assessed, and modified. Colonists will be enlisted to provide commentaries, and the most skilled metaphysicians among them will remain aloft while their brothers and sisters descend to farm and fish. Whenever the important issues seem settled, a new colony ship is certain to show up, and elder plantations will dedicate surplus energies to rescuing the immigrants from their naive ideas."

Sid scratched his chin. "It sounds like a major diversion from practicality. I mean, there are worlds to terraform —"

"Ferment will spread from world to world. Factions will multiply, each eager to populate its continent and reach a state of development sufficient to permit the manufacture of right-minded starships. The ensuing galactic civilization — well, I weep to think about it. All that strife, all that conflict! All because you wanted to create jobs for your hippy friends and build a little bureaucratic empire."

"Ah, um." Sid pondered a rebuttal. Words failed him. He picked up the report and flipped through the pages. As he read, his shoulders sagged. He skipped to the conclusion and perked up. "At least there'll *be* a galactic civilization! Like you say, as long as we don't teach our spaceships about phenomenology . . ."



MEMORIES OF THE FUTURE

by Reginald Bretnor

ESSAY

Reginald Bretnor's fictional works have been in the fields of science fiction, fantasy, and mystery. Many of his shorter works have appeared in most of the major genre publications as well as in a number of general magazines and academic quarterlies. Two SF novels, Schimmelhorn's Gold (Tor) and Gilpin's Space (Ace) are presently in print. His last appearance in Amazing® Stories was with his short story "Fungo the Unrighteous" (November 1986).

Let us not forget that science fiction of the last few decades has proved to be a storehouse of memories of the future.

— Nandor Fodor, *Between Two Worlds*

Fodor, of course, wrote this from the rather unusual standpoint of a psychoanalyst/parapsychologist, but it does give us a good point of departure for examining what science fiction is proving to be today, under the very powerful influences it has been subjected to during the past twenty or so years. It is now much less a storehouse of memories of the future — or, if you will, of creative speculation regarding the nature of the future — than it started out to be in the days of H. G. Wells and, later, Hugo Gernsback and John W. Campbell, Jr.

What we will deal with here, for it lies at the heart of the matter, is the relationship between science fiction and the human exercise of the scientific method. Since the beginning, two forces have contended in the minds, not only of the public, but of SF writers: faith in science, and the fear of it — and this contention has been complicated by the fact that a vast majority of people simply do not understand the laws that govern the functioning of the scientific method and of its resultant technologies.

I am not referring only to our mass of boob-tube addicts and supermarket tabloid readers. It is also true of very well educated, highly intelligent men and women, and especially those in the semisciences and pseudosciences. Tragically, it is true of most statesmen and politicians, of most military and naval people in the highest echelons of decision, and — even more appalling — of a great many scientists themselves.

Yet these laws are extremely simple and extremely inflexible: given adequate financing and adequate human and material resources, scientific and technological progress proceeds along exponential curves, *not* along lines which are arithmetic and linear — and this progress is open-ended, so when a steepening curve appears to reach asymptote, frequently another (often an unanticipated one) overtakes it, a scientific and technological quantum jump.

We are used to thinking of these quantum jumps as exceptional occurrences. We *should* accustom ourselves to thinking of them as inevitable.

The exponential nature of scientific progress constitutes the first law. Subsidiary to it is the law that *ultimately* every scientific and technological innovation must become more efficient, easier and cheaper to produce, and more generally available. (Witness the proliferation of super-weapons in the world today and the frightening increase in the "do it yourself" manufacture of hallucinogenic and other destructive and addictive drugs.) A third corollary is that neither science nor technology can ever hold any permanent secrets. A fourth — and perhaps most alarming one — is that science and technology will do their work for anyone with the authority and the resources, for saint or sinner, sane idealist or mad tyrant.

Here we have a very dynamic method of functioning in what we now know to be a completely dynamic world, in which we ourselves are complex dances of subatomic particles, in which there literally is no such condition as *stasis*. And yet our languages — and I know of no exceptions except those restricted scientific languages that have had to be invented to make scientific progress possible — are intrinsically semistatic, accretions of our prescientific centuries, devised to describe a good, solid, only very slowly — often imperceptibly — changing world. We are compelled to think in linear, arithmetic terms because the languages in which we think are built that way. Linguistically, we are not geared for quantum jumps.

An excellent example from our own field is the fact that, while many science-fiction writers were able to foresee the increasing use and importance of computers, none to my knowledge foresaw their miniaturization by way of solid-state electronics — unless we let Dick Tracy's wrist TV sneak its

way in. Another example is the still persisting transfer of past military techniques and instruments to wars in space: battleships, World War I aerial dogfights, and — God help us! — even swords and bayonets.

So our "memories of the future" have been rather less than optimal even in those areas where we are not compelled to deal with anything except the hard sciences. Where they now have fallen down even more grievously is in the field of those human affairs that come within the provenance of the semi- and pseudosciences. Obviously, considering the spate of SF novels now being published — I shall comment on the difference between SF and science-fiction a little later on — no one can possibly read all of them or even take the time to determine the content of all those escaping the reviewers; thus, even among the mass market paperbacks there are bound to be exceptions to my generalization, but that does not change the overall truth of the statement. There now seems to be little serious effort to explore possible solutions to mankind's most pressing problems: war, psychopathic and sociopathic people and systems of belief, the approaching unemployment of the unintelligent, the anarchy of nations, ecological disaster (though that is more frequently touched on), and — once again — the uncontrolled and inevitable proliferation of agents of mass destruction.

Much SF has been written on themes derived from and reflecting these problems, but little of it in recent years has been even as positive as the late Victorian Utopian novels. (One exception that comes to mind is Dean Ing's *Soft Targets*, which examined the enormous free publicity given terrorists by our largely mindless,

sensation-oriented mass media.) Here, of course, the objection will be raised that it is not the proper function of science fiction to reform the world, and that such dreary themes will fail to entertain our presumably Rambo-oriented readers.

Why? Science fiction's readership still embraces a wide range of intellects, many well above average, so surely the great adventure of man trying to solve his survival problems — with all the strife and peril this may entail — should be as stimulating and gripping as any bloody rehashing of the Vietnam fiasco translated to alien planets and distant galaxies. The themes of this adventure are far harder to write well than today's forms of space opera, for to be good they must not only exhibit some evidence of serious thinking, but also must meet all the traditional demands of good fiction and good drama — and possibly that is why they are now so rare.

Where are our memories of better futures, of futures in which man has evolved or is evolving out of the problems now besetting us, and in which the road is opened to that infinity of worlds, and all those parsecs of adventure, and all those new problems we now scarcely can conceive of, which the limitless universe may hold in store for us?

Let us consider the mass influences that have been operating on SF, especially during the past two decades, and the often tragic intellectual vulgarization they have brought down on us.

During modern science fiction's formative years, a majority of its readers, editors, and writers had one thing in common. They may or may not have constituted an elite, but we can say definitely that they were *cognoscenti*, for even kids who were attracted

primarily by lurid covers on which well-muscled heroes clobbered BEMs unspeakably assaulting breasty blondes — even they understood that it was science that would make such adventures possible. At the other end of the spectrum, there was John W. Campbell's estimate (based on a poll he conducted) of the readership of his own magazine, *Astounding Science Fiction*: "The readers are largely young men between twenty and thirty-five, with a scattering of younger college students and older professional men." He also estimated that they represented "a good one third of the young technical personnel of the nation."

Especially under Campbell's editorship, an increasing number of science-fiction writers developed from exactly that group, though from the beginning of SF as a self-conscious genre, many of its writers were what they had been before such a thing as a science-fiction ghetto was even dreamed of: professional writers on every level who would intersperse their more general writing with occasional SF — Poe and Kipling and Stephen Vincent Benet, just to name a few — and including, of course, any number of popular pulp writers of varying ability.

By no means all SF's early editors, again, were from the scientific/technological community, though Gernsback, the first of all, was and, of course, so was Campbell.

At any rate, from the '20s until the '50s, SF remained in its ghetto, and it took the dramatic impact of the first satellite launchings to start the revolution — if, indeed, there has been a revolution.

Three new and very influential groups suddenly discovered SF. The academic world was one. The bottom-line men of general publishing were

another. The visual entertainment media were the third.

The Influence of Academe

To suggest that the influence of academics on SF has been anything but a mixed blessing invites an indignant denial, but the suggestion is easy to defend. The great majority of academic intellectuals fitted neatly into one of C. P. Snow's Two Cultures, the literary one. Many of them, though not directly connected with literature, were certainly in a position to influence the attitudes of students, and the "literary culture" must be understood as including most faculty members involved in the semi- and pseudosciences, disciplines sensitive to criticism on the score of lack of predictability. As Snow pointed out, the literary culture has been generally suspicious of "hard" science and technology, and only too often actually antagonistic to them. Where the English Departments of colleges and universities were concerned, this was exhibited very clearly in their attitude toward SF. It was a pariah, unworthy of serious literary consideration.

Essentially, this attitude did not change when the impact of space flight, the looming threat of ICBMs, and the suddenly increasing interest people — especially young people — were taking in such matters combined to force a change of attitude (which incidentally fitted in very nicely with the depletion of grist for the literary Ph.D. mills. By granting a smidgeon of respectability to science fiction, a brand new lode of research and dissertation material was made available. And SF, almost overnight, had any number of instant experts to explain it, not only to the young, but also to the world at large.)

Inevitably, new writers were among

those influenced, and more and more SF began to appear overloaded with a semi-Bunthornian, semiexistentialist sensitivity, often overtly antiscientific, and sometimes telling no story whatsoever. The confusion between science fiction, science fantasy, and outright fantasy became even worse confounded. Just as the literary culture lacked scientific rigor, much of the new material produced under its influence lacked the logical rigor that even good fantasy demands.

There have been some signs of improvement, for it is difficult to get involved with science fiction without something of its essence rubbing off on one, and yet an inordinately high percentage of the better science-fiction writers now emerging from the academic community itself have their major background in the hard sciences, not in the literary culture. By this time, too, many younger faculty members have become sufficiently interested in SF and its possibilities to drop some, if not all, of the pretensions and prejudices of their predecessors. However, the quality of our memories of the future has not improved, and this, I think, can be attributed in part at least to the fact that the influence of the literary culture has been to prevent any clear understanding of the point I made at the outset of this essay: the vital importance of those laws governing the scientific method and its consequent technologies.

To say that the academic influence has contributed to the vulgarization of science fiction may seem unfair, but is it? The generally antiscientific beliefs and attitudes of the literary culture have much more in common with those of the mass market and the mass media than with those that have given us our greatest memories of the future. For instance, no matter how artistic or

how highly intellectualized an anti-scientific dystopian novel or short story may be, if it fails utterly to understand how science and technology tick, it is more closely akin to *Star Wars*, *Godzilla*, or supermarket tabloid headlines screaming, "I WAS RAPED BY SPACE MONSTERS!" than to serious science fiction.

One evidence of this is the persisting attempt, ever since science fiction was defined as a genre, to leach the science out of it, sometimes by arguing that it neither is nor can be "scientific," but more often simply by labeling it something else — "speculative fiction," for example — and deliberately blurring the line of demarcation that separates it from fantasy. "SF" — itself is a wonderfully convenient term embracing science fiction, science fantasy, and speculative fiction — despite its convenience does serious science fiction something of an injustice. Hugo Gernsback's rather clumsy "scientification" is a more accurate term. The point of all this is that science is the basis of all science fiction and science fantasy *no matter how stupidly unscientific individual examples may be*. Why? Because without science, without man's exercise of the scientific method, neither science fiction nor science fantasy could have come into being. Much science fiction can, and does, deal with man's misuse of the scientific method, but the antagonism of the antiscientific should be leveled against those who misuse the method rather than against the method itself.

The Perpetuated Ghetto

The academic — and unfortunately also the commercial — insistence on excluding science fiction from consideration as "serious literature" is actually as damaging to the literary mainstream as it is to our literary

pariah, for it perpetuates not only the ghetto, but also the purblind convention that "serious literature" must deal solely with "the warm human emotions" and not with "cold-blooded, inhuman science," and therefore limits its scope by denying it a vast and compellingly important field of human activity. For science is human, and — as far as we know — *only* human. It is quite as human as love and courage and compassion, to say nothing of the seven deadly sins, and while in this universe there may well be other *hnau* who practice it, we have yet to meet them.

There are many examples, some flagrantly overt, others more subtle and less direct, of how the literary (and subliterary) culture's fear of and antagonism to science manifest themselves in attitudes to science fiction. One of the most offensive in its vituperative tastelessness has been *Harper's* grubby little war against the SF field. (I am speaking, let me hasten to say, of *Harper's Magazine*, and *not* of Harper & Row, book publishers.) *Harper's*, at this writing, has printed two sneering articles. The tone is best epitomized by the summing up, in the second, of the works of Isaac Asimov as "prolix spew." When I read the first, I was more than ordinarily shocked, largely because my first published story, "Maybe Just a Little One," came out in *Harper's* in August 1947, and was science fiction — science fiction using a fantasy gimmick, but science fiction nonetheless because its serious theme was the inevitable proliferation of nuclear weapons. Of course, in those days *Harper's* was intellectually secure enough so that its editors did not need to adopt the vocabulary and bad manners of the punk-rock set.

As far as publishing generally is concerned, when it became obvious

that there was going to be money in SF, more and more new editors were either hired or transferred — many of whom knew nothing about science fiction and cared less — and a great many other influential but ignorant people became interested: those accountants and lawyers who, in many firms, have usurped the editorial prerogative of final decision. The result, naturally, was to debase the final product — and that applied not only to serious science fiction but also to every variety of fantasy, so that we have been treated to an unending stream of Tarzans warmed over, regurgitated Thuvias, semiliterate rehashings of everything from the Arthurian legend to the Arabian Nights to Tolkien and *Alice in Wonderland*, to say nothing of gruesome echoes of undigested Lovecraft, with a great deal of crude porn and unpleasant violence dragged in by the tail and much (presumably soul-satisfying) fashionable gutter-speak. Even the visual media, which have demonstrated their ability to degrade just about anything to the 72-IQ level, haven't yet quite matched the worst of the printed material.

More and more often, those of us who have been reading science fiction and fantasy for years now get a few paragraphs into a story or novel and suddenly realize, "My God, this is where I came in!" This poor sort of stuff may hold freshness and wonder for kids who have never read anything, but that does not excuse its existence. The trouble is that so many of the new crop of editors simply have not read enough to recognize when a cud has been thoroughly chewed, and also that so many bottom-line men don't care how many times it's been chewed if they can peddle it.

The effect on serious science fiction has been to submerge it in a sea of the

inconsequential, the too-sensational, the confused and confusing, and by equating it with pseudoscience fiction and outright fantasy to prevent readers from arriving at an understanding of what it is and writers from being stimulated to write it. One way to correct this might be to replace the hodgepodge of awards now being offered with others for more clearly defined categories of work, for certainly pure fantasy, science fantasy, and serious science fiction, at their best, all deserve to be considered serious literature. To continue confusing them, as they now are being confused, can only help to deny all of them that recognition.

The Function of Serious Science Fiction

Those who would deny science fiction literary seriousness invariably say that its function is to entertain, and only to entertain, but they never define what they mean by entertainment. Watching the idiot box is "entertainment." So is a game of poker or bridge or chess. So are the plays of Molière and Shakespeare, Sophocles and Shaw. So are *War and Peace*, *Vanity Fair*, *The Magic Mountain*, and *Don Giovanni*. But some of these are much more than "just entertainment," and so is serious science fiction.

What is it, then? First and foremost, it is not simply "stories about scientific gadgets." It is, instead, about *people*, generally those people in a conceivable future who either are directly involved with the exercise of the scientific method and the new possibilities and problems it may by then have opened up for humanity, or people who are involved less directly because their lives have been affected by it, or people who must contend with a gross misuse of it and of its

technologies — but always about *people*.

Each of us now living can probably expect to experience only a small section of the futures that lie ahead of man, and the only way in which we can possibly share in the adventures and triumphs and tragedies of future generations is by way of serious science fiction. It is a reconnaissance into the future, or rather into a multitude of possible futures. Of course, it must entertain. It must hold the reader's interest. It must excite the reader. But its most important function will be to take him along on that reconnaissance, to let him share the problems and the strivings and surprises that any reconnaissance into unexplored terrain must entail, and so perhaps to prepare him, and the world of which he is a part, for whatever those futures hold.

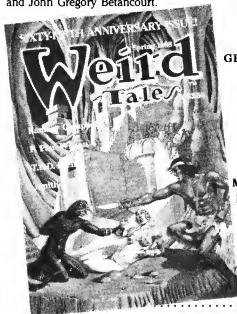
No, "entertainment" is much too passive a word to use in describing serious science fiction, for its memo-

ries of the future can indeed help to determine whether, when the future becomes real, the race of man will have used the scientific method to achieve victory over its own problems and itself, or whether man will become the tragic victim of his failure to understand its working and to use it sanely, ending as a stick-figure in a nightmare.

Therefore the task of the serious science-fiction writer must be to ensure that his memories of the future are as accurate and as logical as possible, and this he can only do if he understands how the scientific method functions and prepares himself for its next quantum jumps, whether they be space-drives, or elixirs of immortality, or even some semantic miracle that would, after all our millennia, at last enable us to know what we are talking about and to communicate it to our fellows.



Edited by George Scithers, four-time Hugo-winner, former editor of *Isaac Asimov's Science Fiction Magazine* and *Amazing Stories*; Darrell Schweitzer; and John Gregory Betancourt.



In our first issue . . .

GENE WOLFE (6 stories!)

RAMSEY CAMPBELL

F. PAUL WILSON

KEITH TAYLOR

TANITH LEE

& more!

In future issues . . .

MORGAN LLYWELLYN

HARRY TURTLEDOVE

REGINALD BRETNOR

NANCY SPRINGER

BRIAN LUMLEY

TANITH LEE

& more!

YES! I want to try the new *Weird Tales*™ — enclosed is:

[] \$4.50 for a sample issue (\$3.50 + \$1.00 p&h)

[] \$18.00 for a 6-issue subscription.

[] \$34.00 for a 12-issue subscription.

Subscription copies are mailed in sturdy envelopes!

Name: _____

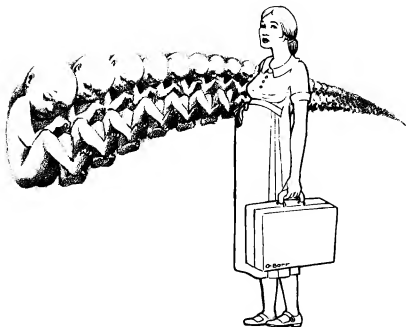
Address: _____

Address: _____

Make checks payable to:

Terminus Publishing Co., Inc.
PO Box 13418
Philadelphia, PA 19101

REPOSITORY
by Kristine Kathryn Rusch
art: George Barr



Kristine Kathryn Rusch informs us that she wrote this story as a response to a discussion she had with her father about surrogate motherhood. We found it to be a very moving response.

Other than her recent story sales to Amazing Stories, she has sold a couple of short stories to Aboriginal SF. She is currently working on a science-fiction novel set in 1951 Utah.

I lean my head against the cool bus window. I'm on the bus because I want to be as inconspicuous as possible. It's hard for a woman in her sixth month to go unnoticed these days. Only the poor, the eccentric, and women like me carry babies anymore. The chances of seeing another pregnant woman on the bus are much greater than seeing such a woman in other modes of transportation. And besides, buses are cheap.

Someday I'd like to take an airplane, even though it's not very exotic. I could afford to now, but I think they'll watch the air- and sonicports, expecting me to exploit my ill-gotten wealth. Mrs. Hildebrandt's credit was so good that Dr. Michaels was going to let her make a small down payment and then pay the rest on the birth of a healthy child. But Mrs. Hildebrandt's politics were as suburban as her lifestyle; she didn't mind helping the poor as long as she could continue using them. She agreed when I told her that doctors like Michaels had usurped the role of pimp, and she offered, before I even had to ask, to pay me directly. I wonder how she'll feel when she finds out I took not only her money, but her baby as well.

I insisted on three installments. Part of the second sits in my purse right now.

The rest of the money is on the way to my friend Cindy in Minneapolis. This morning, when Mrs. Hildebrandt gave me the second installment, I went home, threw a few clothes into a suitcase, and headed for the bus station. I didn't really have a plan until I stuffed half the payment into an envelope and wrote Cindy's address on the front. Fortunately, I'll reach Minneapolis before the letter does.

It feels kind of strange to be so impulsive. They say pregnancy changes a woman, although I've never seen that. I think I've been wanting to do this for a long, long time. I need some way to prove that I'm a person, too. Being a mother is better than being a womb-mother. Mothers are respected.

No one asked me if I wanted to be a womb-mother. When I went to choose my career track in high school, the counselors took one look at my body with its wide hips and heavy breasts and made the decision for me. Of course, they didn't tell me right away. They just entered my status into the computer and used that listing to block me from any other career track. But I have studied. I've studied everything I can on pregnancy and birth.

Scientists have yet to prove the influence of the womb-mother on the child she carries. They know, of course, that the fetus ingests what I do; it shares my moods and my blood. But they don't know how much of the influence extends beyond birth, since the child and I do not share a genetic code. Perhaps all I have ever been is a repository for someone else's embryo.

The seat creaks as a teenage girl sits beside me. She stares at my stomach for a moment, then glances at my face and looks away. I pretend to be interested in the once-rich farmland whizzing past the window. The first time a doctor implanted a fertilized egg in my womb, I was an eighteen-year-old orphan. No one told me about the changes a body undergoes during preg-

nancy — the swollen breasts, the stretched skin, and the almost unbearable fatigue. Although people warned me about the pain of birth, they never told me that it hurts even more to hear a baby cry out as another couple carries her away. All I was left with was an extra twenty-five pounds and enough cash to carry me through the next twenty-seven months, until the doctors allowed me to get pregnant again.

Sleep creeps over me with a now-familiar ease. I doze, and the fear I thought I suppressed seems to weave its way in and out of my dreams. When they realize that I'm gone, they'll start searching for me, and if they're smart, they'll realize that there are very few places that I can go. I have no family, and other womb-mothers won't help me. The authorities will search clinics for a new, pregnant patient, and it won't take long for them to find me.

That's where Cindy fits in. If she will pretend to be my lover, there are clinics in Minneapolis that will care for me, no questions asked. It's still illegal for lesbians to raise children, but there are clinics that fail to report such families to the authorities. As a single woman, I'd be suspicious. As a lesbian, I'll be safe.

The bus stops, and I pull myself to full consciousness. We've arrived at the Eau Claire terminal. It has the gritty, unkempt look of most bus stations. The smell of diesel fuels is almost overwhelming, and the indigestion that has been bothering me all day kicks up. The teenage girl pretends to be looking elsewhere, until I excuse myself. She has to get out of her seat to let me by. I climb down the stairs of the bus and head for the bathroom. The line is shorter than I expect it to be. I use the last of the toilet paper, and when I emerge from the stall, I search for soap and towels, but find none.

"Excuse me," an elderly lady says, "but is the baby yours?"

I shake my head and run my hands under the tap. The woman hands me a hankie from her purse.

"You know," she says. "I carried my own children and worked too. Women today aren't women anymore. They're men with breasts."

Her words made me grin. As I hand the hankie back, I say, "Things have changed."

"Not that much." She folds the hankie and places it in a plastic pouch on the side of her purse. Then she touches my arm. "You have a lot of courage."

I don't know how to respond, so I nod rather vaguely and leave the bathroom. Older women have always been kind to me. They don't think I'm as dirty as younger women do. People watch me cross the floor of the terminal. I climb on the bus and head for my seat. The teenage girl stands to let me by once more.

"You can have the window seat if you want," I say.

Her eyes meet mine for the first time. Then she smiles and flops down next to the window. I sit beside her and try to soothe the irritation within me by rubbing my hand across my bulging stomach.

"Does it hurt?"

Her question is so hesitant that I almost miss it. I look at her closely this time. She's wearing a University of Wisconsin sweat shirt and tiny diamonds glimmer on her ears. Clearly, her career track was college prep. She's probably never been this close to a pregnant woman before.

"It depends on what you mean." My voice sounds harsh even to my own ears. "Being pregnant or giving birth to someone else's baby."

She blushes with startling suddenness. "I — I didn't mean anything."

She looks away. I find myself wanting to touch her, to apologize for taking my nervous tension out on her. I ask gently, "Do you want to feel the baby?"

Her glance drops once again to my stomach, then slowly, she shakes her head. As the bus shudders into motion, she turns away from me and pretends to be interested in the seedy section of Eau Claire.

I lean my head back against the seat. The bus is full of odd people: two greasy-looking men, a family, several elderly people, and some students. Despite my prediction, I'm the only pregnant woman I've seen so far — and that worries me.

The trip to Minneapolis is shorter than I think it will be. Perhaps I have dozed, although I don't remember any dreams. The Minneapolis bus station is even more decrepit than the rest; Cindy once told me the station had been there for over fifty years. It looks as if no one has done any maintenance on the building in all that time.

I disembark, and find one of the few portable pay phones in the building. Portable is a misnomer: the handle of the receiver is attached to a long chain that allows the caller to pace in the area around the phone. I'm glad I found it. Some places don't have phones anymore.

As Cindy's phone rings, two teenage boys walk past me and snicker. I frown and turn my back on them only to find a fat man with stains all over his shirt staring at me. I wish that I had dressed better, perhaps wore a voluminous coat that made me look big instead of pregnant.

After the twelfth ring, I hang up. Cindy's answering machine must be out of order. She rarely leaves without turning it on. She's an interior designer — one of those slender professional women I usually hate so much. But we were friends in high school, and, although Cindy doesn't approve of what I do, she's always tried to help me.

The fat man shuffles over to me as I head toward the ticket counter to ask about a taxi. "You a womb-mother?"

My surprise must register on my face, for he continues, "You can tell by the skin. My wife was a womb-mother, and she had sallow skin just like you."

He smells of sweat and greasy food. My sensitive stomach threatens to embarrass me. "I need a cab," I say, and then regret the words.

"There's usually a bunch of Red and Whites outside. I'll go out and get one for you."

"No," I say too quickly. "I'll get it myself. Thanks."

I leave him standing in the dirty lobby. Just as he predicted, several cabs wait by the door. I slide into the first one and give the taxi driver Cindy's address. As he drives me uptown, I scan the streets for pregnant women. I only see two — one standing forlornly near a ramshackle apartment building, and another, obviously a wealthy eccentric, wearing a three-piece maternity business suit.

I envy her.

The taxi pulls up in front of Cindy's place, an ancient white house hidden among a clump of bushes. Cindy lives on the first floor. The driver takes my suitcase to the stoop for me as I knock.

No one answers.

I sit on one of the empty porch chairs to wait. Through a window across the street, a woman watches me. I touch my stomach nervously.

I have not felt the baby all day. The trip must have upset it. The taxi pulls away, and when I can no longer see his taillights, I study the house. It looks empty. The living-room curtains are open a crack, and I peer in.

The thin light illuminates the dust on the hardwood floor. Most of Cindy's furniture is gone, and boxes litter the room. Once before she had moved away without telling me. Perhaps she has done that again.

The street is unusually quiet as twilight approaches. I wish I had had enough sense to make the driver wait, but I am not used to having enough money to afford such things. If Cindy doesn't get home shortly, I will have to cross the street and ask that nosy woman if I can use her phone. The authorities won't search the hotels for me tonight. Dr. Michaels won't even notice I'm missing until my early morning appointment tomorrow.

My palms are sweaty. The sun is going down, and as I stare at the street, I grow light-headed. The trip has almost been too much for me. I need a good meal and a nice, soft bed. I shouldn't be sitting in the cold. I have the baby to think of — my baby.

My hand goes again to my stomach. Cindy is not going to come home tonight. I can sense it. I wish now that I had called her before I left home. I'll have to call her from the hotel.

I pull myself to my feet, and then I pause with my hand against the building. The nausea seems almost painful. Then in answer to that thought, a jolt of pain runs through my side. I breathe deeply, like I do when in labor, and after a moment, the pain passes.

The fear doesn't.

Dr. Michaels had warned me when I took the Hildebrandt contract that pregnancy might be difficult. I was old, he said, and my body had gone through six other births. I wasn't in the best physical condition anymore. I had minor health problems that he thought might interfere, but he had hired me anyway because I'm cheap.

I try to pass the pain off as fatigue, but know that in the morning, Cindy

or no Cindy, I will have to see a doctor.

I pick up my suitcase and leave the porch. There is a suggestion of pain in my side. I am placing a strain on myself, I know it, but there is no one else to rely on. There never has been.

As I step on the sidewalk leading up to the nosy woman's house, she closes her curtains. Perhaps she will pretend she's not home. I know how I must look — a tired, poorly dressed pregnant woman lugging a battered suitcase. My profession must be clear whether she can see my skin or not.

The stairs leading to the house creak as I climb them. I rap loudly on the wood near the window cut into the door. Inside something crashes, and I hope the woman doesn't think I'm stupid enough to believe the house is empty. I rap again. Finally, I hear footsteps, and then the door swings open.

She's sharply dressed. Her clothes tell me she's the kind of woman who hires someone else to bear children rather than mars her body herself. She leans against the door, her movement very graceful.

"What?" she snaps.

I want to snap back at her, but I'm in no position to prove that I'm a person too. "May I use your phone?"

She scans the length of my body. I can see the refusal in her face.

"My friend isn't home," I add.

"Your friend moved out two weeks ago."

Moved out? The pain returns, sharp and fast. I take an involuntary gasp and clutch my side. The woman scans the street, then steps aside so that I can get in the door. She moves as close to the wall as possible so that she won't have to touch me.

"Last thing I need," she says, "is for you to have a baby on my porch."

The pain is easing away, and I manage to straighten up. "All I want is to use your phone."

She frowns and waves toward a carved ivory phone in the corner of the hallway. I hit the information button and scan the screen for cabs. I feel very weak, and there is a tightening around my belly. Cindy's moved, and that means her mail has been forwarded. Now I have two reasons to search her out.

I find the number for Red and White Cabs. Suddenly, something inside my womb ruptures, and I grip the table for support. Water splashes down my thighs. I try to squeeze them together to keep any more fluid from escaping. "You got a chair?"

The woman looks at me with absolute disgust, but she helps me to the deacon's bench near the kitchen door. I lean my head against the wall and try to ignore the tears welling up in my eyes. This time the pain is not going away.

"You need a doctor," she says.

"No!" I can't go to a doctor. Then Michaels will know my location first thing tomorrow morning.

"Well, I'm not going to let you die in my house." She picks up the receiver and has the phone dial an ambulance. As she gives the location, I try to drag myself to my feet. The room spins, and something flutters in my stomach. It is not the child.

She hangs up the phone and forces me back down onto the deacon's bench. I'm too weak to fight her. I can barely breathe. This feels like hard labor, but it is too vicious. The child is leaving on its own accord. My body is trying to shove it out.

"I can't see a doctor," I say again, but the woman ignores me. She puts an old blanket around my shoulders but won't let me move off the hard deacon's bench. I wrap my arms around my womb as if I can hold the child in. More liquid has seeped through my legs, probably staining the bench. The woman is hovering near the window. When her neighbors ask her what has happened, she'll explain it as if she's done her good deed for the week.

Michaels was right; I am too old for this. And God is punishing me for stealing the fetus by taking the fetus away from me.

I don't know how long I sit before I can hear the sirens. They pulsate like the pain in my womb. The red lights fill the room, but they don't move. It's the walls that swirl. The door bangs open, and male voices with a professional urgency fill the hall.

The woman answers them, but I can't hear the words. I'm concentrating too hard on keeping the fetus in my womb. What will Dr. Michaels say when he discovers that I not only stole the child, but aborted it, too?

Strong hands lift me onto a softer cot. I am dizzy, nauseated, my entire body fighting against itself. *Hang-on*, I tell the baby. *You're mine. You have to hang on.* But the fetus is already dead. It has to be. I'm doing all the work.

They slide me into the ambulance and close the doors with loud finality. Around me, lights blink and the world has become a kaleidoscope of sound, texture, and primary colors. Something cold touches my swollen belly, and someone holds me so that I can't pull away.

The ride seems to take forever. Finally, they stop and carry me from the ambulance into a garishly lit room. Faces poke themselves into mine. People ask questions that I can't answer. Don't they know I need all my strength to hang onto my child?

They lift me from the cot onto a table and examine me. These people seem to think my baby will die. But they don't know me. I won't let it.

Suddenly, my body breaks open. It's as if my pelvic girdle has exploded and my insides fall out. It's not a birth. It's a purging. And as my baby leaves me, I scream.

My body throbs. I climb slowly toward consciousness, hesitate, and then wake up. A cool sheet rests against my cheek. Fluorescent light seeps in from the window in the door, but the outside window is dark. Slowly, my hands slide to my stomach. It's flat.

A tear slides down the bridge of my nose, falls onto the pillow, and rolls until the wetness hits the skin of my neck. Miscarriage. They tell you it destroys any womb-mother's career. They don't tell you it destroys your soul as well.

Dr. Michaels will speak to me in the morning. He'll tell me that Mrs. Hildebrandt will sue me for neglecting her child. He'll tell me that the hospital will sue me for abusing a privilege. And he'll tell me that he'll press criminal charges for the theft of the money.

The baby is gone.

Slowly, I drag myself out of bed. It hurts to move, and my legs are weak, but I can't stay here. I can't let Michaels find me.

In the tiny closet, I find my battered suitcase and my purse with the money still in it. I drag them out, open the suitcase, and pull out some clothes. As I pull off the hospital gown, I find that it's stained with blood. I lean against the locker for a moment, suddenly conscious of the pain in my lower body. It feels as if my womb has been turned inside out and burned. I'd like to crawl back into the safety of the bed and forget, but I can't.

I take a large sanitary napkin out of a drawer, slip on my clothes, then close the suitcase again. It's very heavy, but I have to carry it. I'm a strong woman; I had little bed rest after the other births. I'll have to survive without bed rest now.

The hall seems empty, but down near the nurse's station, there is a lot of activity. I can't sneak out; I don't know how. I walk down to the station, for in every hospital the elevators are there.

Walking is very painful.

The nurse sees me before I reach the end of the corridor. She runs toward me, grabs my waist, and tries to lead me back to the room. I refuse to move my legs, and I refuse to lean on her, although I'm tempted.

"You have to get back into your room," she says.

I shake my head. "I'm checking out."

"Miss, you've just had a miscarriage. Give your body a rest."

There are babies painted on the walls. Pink, blue, and white children, like little dolls. They put me in the maternity ward.

"I can't stay."

"Come on." She applies pressure to my back. "You'll change your mind in the morning."

"I'm checking out. When I want to check out, you can't make me stay."

"Wait until morning," she says. "We can't even look at your bill."

"I'm leaving now." I sway slightly. If she pushes me again, I'll have to go with her. I'm too weak to fight. "There's always someone with access to records."

She frowns, but helps me to the nurse's station. She goes behind it, punches a few buttons on the computer. The screen bleeps at her. "Wait here," she tells me.

I wait until I can't see her anymore, then I take the elevator to the ground floor. The exit is clearly marked. I walk through the double doors into a nearly empty parking lot. The sky is beginning to show the first signs of dawn.

I have to concentrate on walking, but I can do it. And I will continue doing it until I see a taxi. It'll take me to the bus station, and I'll buy a ticket for the first bus. They won't be searching for a slender woman with a battered suitcase at the bus station. If anything, they'll be searching for a womb-mother, a battered womb-mother. They won't be searching for me. ●



LEDA AFTER THE SWAN

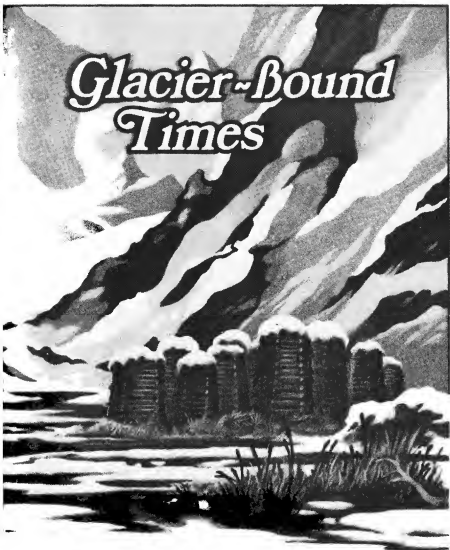
She watches this river in all weathers,
Her gaze skipping like a stone,
Then, slipping the dark curve of a wave, gone.
She hears the long sibilance of wings leaving,
The swan sweeping away on the wind,
The incredible lightness of seasons fleeing,
A white silk smoke melting
Or snow dispersing at the moment of watching.
She remembers the weight of breath and feathers floating,
Love flaring, like ice refracting the line of the sky's fire,
As the sun sets behind trees that seem to bleed.
She dreams a burning core of air, of war, of power hurtling
On half-seen wings, swimming at stars.
Her thought is spinning, a stone rippling the weathers of water,
Resting only on the restless action of this small sea's passion,
Where her distant reflection shows a city fallen
For Helen, who is cold as a swan.

— Ace G. Pilkington

Ice-Gouged Lakes,



Glacier-Bound Times



by Rebecca Ore

Art: Stephen E. Fabian

Rebecca [Brown] Ore lives in rural Virginia, where she devotes her time to writing science-fiction tales. Her novel, Becoming Alien, was published in January 1988 by Tor Books. She is currently working on the sequel to that story.

Her previous appearances in Amazing® Stories, "Projectile Weapons and Wild Alien Water" (May 1986) and "The Tyrant That I Serve" (September 1986), were selected for the 1986 recommended reading list published by Locus.

For this story, the author would like to thank Dr. Rhodes Holliman and Dr. Jerry Via of Virginia Tech for their assistance in checking accuracy of the electron microscopy technique.

Skinned, the creature looked like a man-sized water shrew — blockier head, longer proboscis — then Litta saw its hands. Too much flesh was exposed to the cold. Despite black claws, as pointed as sharks' teeth, the digits were long. Litta bent a thumb across the palm toward the other digits. *Opposable.*

"Litta, help me dissect. It's called *scullada* — another illegal alien import," the senior ecologist, George Mason, told her. "This one, I fly-fished for, a giant fly with monofil cuffs instead of a hook."

"Rather peculiar thing to do," she said, wondering if the creature's brain filled the boxy skull.

"If I'd gone up officially, the Catskillers would have never guided me to tiger-stripers."

"You have the skin?" Litta asked.

"Here. Have a jacket made." He opened a freezer and pulled out the hide, folded twice.

Litta brushed ice crystals off the soft fur. "Like sable crossed with tiger." Silver and black swirls — the fur seemed softer than cashmere.

"We'll have to exterminate them, so your jacket will be very valuable." He smiled slowly at her, his eyelids half-drooping.

"Fingers aren't right for a glacier lakes animal. What if they're sapients?" she asked, sliding the frozen pelt to Mason, refusing it.

"The niche on any planet is too unstable for them to have evolved much," he said. "The Catskillers on Lake Albany claim this is a traditional northern game animal. But the Cheshees have sold some very similar furs — not Ter-ran at all, wrong trace elements."

The Cheshee annoyed Litta — aliens like dinosaurs who traded technologies with the Mexicans and came wandering up to the summer glacier fronts like nuevo temperate tourists. Ancient and cold, they'd smuggled contraband before. No, she reminded herself, they weren't cold-blooded, just

ironic, snide bastards. "The same DNA?" The scullada eyes also seemed more complex than a water creature needed.

"Yes. Come the next interstadial, or if the glaciers advance again, they'll be gone, anyway."

"So we don't need to exterminate them really. It's just us wishing we could boss the ice around. Could I study them in site before you send for Eco Corp units?" She knew she'd spend this winter locked up in subways and dormicles, but maybe, come ice-out, she could escape the hordes of Mexican and African tourists who came to see New York's art treasures, guarded against both ice and nuevo temps.

"What you after?" Mason asked her. "Embarrassing the Cheshee? Make 'um sapient killers?" The skull saw whined as Mason sliced a cap of bone off the creature's skinned head. He lifted the cap with hooks and peered at the brain. "It's a bit big."

"Do they all have such pelts?" she asked.

"Only a few males."

Finally, the animal lay completely gutted on the soft plastic table, blood clotted in the table gutters, muscles cut from their tendons and pinned down. Mason photographed what he'd done, then cut away muscles and organs, and photographed again.

Dark muscles, high hemoglobin, Litta thought, sitting on a lab stool, heels on the rungs, watching Mason cut out a lung. *How odd to be transported from planet to planet so sapients can have fun killing your relatives?*

"Dissect a hand, would you?" Mason asked. Litta got off her stool and pumped latex solutions into the veins and arteries.

After the latex hardened, she cut and found the vascular heat shunts she'd expected to find in a subarctic animal, but the hands showed large secondary veins and arteries leading to the thumb and index finger, as though tactile sensitivity might be worth the risk of body chill.

"They have odd eyes," Mason said. "Come directly from the top of the brain to the top of the head."

He detached the proboscis, a short trunk with bones and tendon attachments. The mouth and nasal passages were separate — no breathing through the mouth at all. A thin jaw, small grinding teeth. Litta wondered what they ate when she saw the teeth — both incisors and molars were small and thick. Shellfish?

As Litta mopped the floor after the dissection, she thought, *Dissected extraterrestrial animals look as helpless when dead as any Terran specimen.*

She went to the top floor of the laboratory for coffee and looked out a window at the distant early ice glittering in the sunset. Litta thought briefly about the Croton Ice Wedge, the great fusion generators, the twenty-cent tax on her cup of coffee that went to fight the ice.

The ice had come slowly enough to allow humans in the north to escape — first Eskimos, Lapps, Siberians, then Russians, Canadians, and Scandinavi-

ans — some through transformer gates to other planets, others to the south. After 500 years of ice, the new loess lands in Burma and South China produced more crops than the American Midwest ever had. The sea sank, opening new croplands in Central and South America, cold pastures across reclaimed Beringia, grain and grasslands in the Sahara.

Each century, enough iron dust was shot up into orbit over Antarctica to keep the planet from freezing completely.

Manhattan taxed its citizens a 30% VAT for the great ice walls and for shuttle loads of iron dust. But Manhattan had always been expensive. So expensive the lab couldn't afford the latest Mexican scanning-array computers.

After Litta tossed her empty cup in the winter burner, she went to the basement and caught the lev-tube train that took her to her apartment by the city wall.

Inside, she turned on a holo of Mexico, where all the oaks were now, mule deer and high-rise apartments with balconies. Ya, ya, Mexico, with the old continental shelves above water, growing oranges and corn. She'd at least gotten two years of study there, Cheshee and Mexicans both making her feel like an ice-knocker chilling their Axtecoidal glow.

Finally, she checked the emergency heat alarms and crawled into the bed-tube on the wall opposite the hologram. She went to sleep and dreamed about the size of that creature's skull.

The next morning, Litta microtomed frozen chunks of brain tissue, then floated sections in Zamilla's solution. "They come to lures?" she asked Mason.

"Like a salmon fly, but with monofil hoops, to catch the snout, a front paw. Haul you all over that water. What did he weigh, live weight? 250 pounds? About. Jumps some, too. How does the brain look? Then the guide threw a rope around the snout, suffocated him."

"You'd think the first one that got away would warn the others."

"So they couldn't be that bright," Mason said. "The local headman got a law passed. Requires local guides and a \$500 hunt tag."

Litta examined hundreds of slides of one-cell-thick, sliced scullada brains, a cell-by-cell examination of the structures of the brain. Then she coated chromium oxide on frozen fracture sections after finishing the light microscope studies.

The brain had decomposed between Lake Albany and Manhattan, enough for the dendrite structure to be blurred.

Litta looked at the photographs of the hands, calluses on the fingertips, chipped places on the claws, and applied for a field study before the Ecology Squad began extermination.

"Stubborn as an ice-knocker," Mason told her, but he approved the study.

The Marcy Glacier and the Batten merged with transient ice over Lake Albany. Dead winter — all Manhattan switched to heat-producing work — manufacturing, sewage composting — all travel going through tunnels. The NYC TV's test pattern was FIGHT D'ICE.

After ice-out on the Hudson, Litta assembled her gear — cameras, tape recorders, foam-skin suits, vapor-permiable sleeping bag and tents, and a small lithium-powered stove.

A university plane bobbed on its floats, moored to oval granite and steel pilings under the 50th-Street cliffs. Under the cliffs, farmers set muck crops in the glacial till, driving balloon-wheeled tractors with planter boxes, setting cold rice seedlings.

The city — built now of granite and steel-reinforced concrete — looked stubby compared to the 21st- and 22nd-century photos. The spring crews were in the streets, clearing away frost slabs. Behind the men cracking the frost slabs free, other men drove iron spikes in the frost scars and spread concrete.

"Lot of trouble to live here," a man helping load Litta's baggage said to her.

"Yeah? Just think of the last ice age — no fusion." Litta made sure they loaded her duffles where they'd not get punctured. Then she climbed in beside the pilot.

The plane swung out into the Hudson and began taxiing against the wind draining off the Adirondack Ice.

Litta saw the fishing village on the Catskill island, under a small mountain glacier whose winter path curved slightly around the village's concrete domes. "Eskimo and Catskiller blood down there," the pilot said. "Real tough people."

As the plane taxied in, Litta saw three scullada bodies, all striped-furred, lying on the dock, one-half skinned. The pilot opened his door and tossed a monkey's fist on a mooring line to an old man with blue eyes and dark skin, standing on the dock.

The man on the dock handed the monkey's fist to a boy crouched at his feet. As the boy snubbed the mooring rope around a winch and pulled the plane close, Litta saw that the dead scullada eyes were closed, as if pinched shut. One's nose structure was torn almost off, but even that one's eyes were squeezed shut. An image of human bog burials, the real old Danish ones, came to her. *If they are sapient, they're as crazy as we were, coming out of the first ice with human sacrifices.*

"Here to study them?" the old man asked. Native and migrant genes had mixed in him: black hair with grey at the sides, blue eyes, but Asian eyelids like an Eskimo's. "Ya Charl Stonemarker, headman here. You Litta Serl?"

"Yes," she said. "You say scullada is a traditional game animal with your

people?"

"Come down from north wi' us." He stood with folded arms, the eyes suddenly more Eskimo than Catskiller. "Make study, we take you out. But scudders don't like messing 'round their lodges. Split a guide's skull once when he got too curious, laid bone open with a rock."

Sea otters used rocks, she thought, but . . . "We need to know what the season should be on these creatures."

"Trophy coats scarce," the man said. "Trophy males, pointa honor to take." His language turned suddenly Standard. "We can manage this fishery ourselves."

"I need a boat, with a navi-comp, to take me up." Litta wished she'd brought her boat now and had done her own surveys.

"We heard talk about getting the Environmental people on these creatures. Traditional game animal, offends us that you doubt it."

Mason talked too much. "How fresh are these?" she finally asked Stonemarker.

"Caught this morning."

"Can I take a skull now?" she asked.

"Brains and all?"

"Yes."

Stonemarker skinned the head and chopped through a cervical vertebra with an ax. Litta sawed open the skull and sliced the brain into preservative.

"Thanks," she said. Stonemarker knelt to finish skinning the body, then put something in the creature's mouth before he rolled the skinned corpse off the dock. It splashed and sank.

"We return the body," he said as Litta stared. "Scudders eat weird, give you gas."

"What if they're intelligent? You think you'd want to hunt them then?"

The old man stomped three times on the dock. A scullada trunk curled out of the water and whuffed at Litta. The scullada's body was just a vague darkness in the murky water. "If scudders don't mind us taking furs," Stonemarker said, "then what's it to you, city woman?"

The boat, a shallow-draft cruiser about 35 feet long, settled down to a steady 15 knots, headed west over what had been the main channel of the Mohawk.

"Oughda set up on a rock island," one of two guides said to Litta, "then johnboat it to the scudder feeding grounds."

"Flies eat you if you don't have Tri-Acts," the other guide said. "They got to drinking Army Juice. Glacier outwash marshes real buggy."

"I'm prepared," she said. "Rock island sounds good."

"Done this kind of thing before, lone woman?" one asked. "Feds overrode the local guide law for you, but you may regret it."

"With a wolf pack," she answered in full Standard. "I got to pet the pup-

pies, eventually. Just because I live in Manhattan . . .”

“Nothing against ’Hattan. Credit’s good.”

Alone, finally, on rock polished by the glacier’s advance fifty years earlier, Litta sat on a campstool, her lithium stove turned low to keep her coffee hot. The boat grew tiny, wake shining as the sun dropped toward the Batten Ice, invisible from here, except for its reflection on the clouds. Patches of snow lay around her tent; lumps of ice floated in the water. She smeared on insect repellent, then turned the stove up to boil a food pouch. *Scullada, obviously alien. No predators except us?* She wondered what proteins varied to give humans gas.

The next day, Litta explored the rock island. A tiny group of firs had found soil, rock broken down by lichen, in a cleft out of the wind. Across the island, willows and reeds grew in glacial till dropped by the sluggish current.

When Litta went down to get water, she saw two eyes floating just under the surface. Then a short nose tube came up, sputtered, and arched toward her, sniffing. Litta went rigid. The nose tube quivered, sank into the murky water.

Litta rose slowly and looked over the lake. She shook — the thrill, the adrenaline jolt, of being alone with a free wild creature larger than a human. After looking over the misty water for V-ripples and bubbles, she slowly knelt back down and filled the pot.

An alien sports animal, like the wild boar and brown trout. So creatures with space-gate facilities, she mused, move them from planet to planet, saving them from drought and glacier maximums. How intelligent do they have to be?

Funny, too, how obsessed we northerners are with keeping Earth pure, as though we’d goofed ecologically and brought on the ice.

After breakfast, Litta loaded the johnboat with lunch, flares, and a radio. The boat, as she rowed, pushed aside thin night ice. By midmorning, she saw lodges in the distant marsh, much bigger than beaver lodges, towering over the cattails.

Now, to probe their territorial boundaries. Litta shipped the oars and began poling, iron foot of the pole squishing into the mucky bottom.

No sign — no bubbles, no circular rise patterns, no dark forms in the water turbid with glacial till.

Then a splash. Two gray hands jerked the bow of the johnboat. Body humping convulsively, the scullada shoved the boat backward. The oars clattered against the thwarts, and the pole, caught in mud, snapped. Litta tumbled against the stern.

The scullada thrust the boat, many hard jerks, to deeper water. Then it swam around to the stern where Litta sat. It reared out of the water backward so the eyes on top of the blocky head pointed at her, like a whale’s spy

hop, water quivering around its body as the invisible feet thrashed.

She said, "It's all right, scullada. I didn't come to steal your babies."

The creature blabbed flabby sounds from its trunk. Slowly, it sank back into the water, then paused, eyes barely above the surface, breathing in and out rapidly through the up-curved snout.

Litta saw other sculladas swimming toward them. The duffle with the hypo-gun caught her eye, but she was afraid to shoot while the other sculladas were out of range but closing in. *Maybe I ought to leave?* Gingerly, she reached for the short spare paddle, not wanting to risk losing the long oars to the sculladas, thinking, too, that the short oar might be less threatening. Slowly, she turned the boat. The oncoming creatures halted, a ragged row of eyes and tube noses.

Litta eased the blades of the big oars back into the water, then began rowing, ready to stop the instant an oar touched flesh.

The sculladas stayed where they were. Litta sighted across the oarlocks to triangulate how far she was from the lodges. She rowed farther away and took out binoculars to watch the eyes and noses swirl away underwater. Then, trembling, she took out her note pad and jotted down her first observations.

By the time she got back to her island camp, her arms felt heavy, as though she'd been hand-turning compost. Weight machines didn't condition enough, she thought as she hauled the boat in and secured it before wading back through the icy water to get her duffles out. Encountering the sculladas left her feeling dazed. "A pity Eco Corp will want to kill them," she said aloud to the cold spruces growing in the cracked rock.

That night, she heard sculladas calling around her island and a loon's laugh back.

The next day, Litta rowed back toward the scullada colony. No sign of sculladas. She took out her glasses and scanned the lodges.

Nothing. The boat rocked as she opened her duffles and looked for her wet suit and the rebreather. Carefully, she poled closer, closer, sitting with her feet wedged against bottom thwarts and her back pressed against the edge of the seat. No scullada appeared, so she pushed the johnboat farther toward the lodges, seeing the canals between them.

Hogans, they're the size of hogans. She poled the boat through last year's cattails, blue glacier chunks. Beavers had built lodges against the larger scullada domes. The scullada colony was utterly silent, except for the sounds of the pole thrusting into the mud. Even the beavers had gone.

Big logs in the house walls, and notched, not quite as neatly as human log cabins.

She poled the boat into a four-foot-wide canal, staring at the lodges, smelling the gas her pole stirred out of the muck. *No lodge entry from above water.* She tied the johnboat to a spruce log poking out from a lodge wall and

pulled on her foam-skin diving suit and strapped the rebreather to her back.

Then over the side in a mass of noisy bubbles, a waterproof flashlight in her hand. The water chilled her face, but she found the entrance and swam in very slowly.

Litta broke through the water surface and listened. Nothing except the water sloshing against the sides of the entrance tunnel. She raised her flashlight above water, turned it on, and saw a crawl ramp to her right.

A right-angle turn out of the tunnel to the ramp slows down invaders. She slithered up the ramp into a larger room built on two levels. Here, she could crouch, almost erect, and scuttle around the lodge floor.

The place smelled of urine and dung. Cramped up under the ice all winter, even if they'd kept the tunnels open, some of the sculladas would be too young, too weak to get out. Litta wondered if the sculladas abandoned their winter quarters disturbed by invaders or not.

She almost poked through the wall for air, but noticed a hole in the roof in the upper level of the lodge. The hole was located over a depression dug below floor level.

Litta looked closely at the stones around the depression, moved one, found a hand ax.

My God, they flake stone!

No batons, no core stones, just one chipped stone the size of a scullada palm, shaped like a giant scullada finger nail. Litta scrambled through other rocks, but none of the others were shaped. For a second, she wondered if the creatures had simply found an Indian stone ax, then she found a charred stick, wedged between a log and the lodge wall, hidden, but not quite well enough. *They didn't want me to find artifacts.*

She raised her light toward the roof hole again and saw soot on the sides of the hole. *How in the hell do you make fire if you're an aquatic mammal?*

When she dove back through the entry hole, she found Charl Stonemarker sitting in a power boat waiting for her.

"Do you know they're people?" she asked him.

He stared at her in her foam skins so hard she grimaced. Then he cranked up his boat's motor. "Don't mess with them, city woman. Dying for the stripers is their life. We know to honor what helps us." He twisted the outboard's throttle, and the boat lurched, then rose on its stern as it sped away.

Litta sat by her lithium stove that night, hefting the stone. She radioed in to request more observation time.

As she put her radio back, she wished they'd worked up a code, wondered if Stonemarker listened. She put the stick and hand ax in a plastic bag and sealed it.

In the morning, the sun burned a vague red through the haze as Litta went to the beach for water. She saw a scullada hauled up on the rocks. Its fur wasn't striped in broad swirls of silver and black, but, before the creature

wriggled backward into the lake, Litta saw traces of swirls in dark and light grey.

The creature turned around twice in the water and stared back at her. His snout curled out of the water, and he tooted at her, then sank, eyes last, below visibility.

Litta set up a strobe camera where the scullada had hauled out of the lake.

Around midnight, Litta heard a high scream, hit the spotlight, and raised her marking gun.

The scullada, blinded by the glare, screamed again, then lay its head down and whimpered. Litta felt a twinge of shame but fired the red marking charge at the creature's back, anyway. It cried out as the dye bladder hit, then the creature went limp on the rocks.

After turning the light out of the creature's eyes, Litta loaded a trunk cartridge and walked carefully toward the scullada. It reared back, stared at its hindquarters, and moaned through its nose tube.

Slowly, she walked closer, saw its penis protruding from the genital slit. His eyes fixed on her face, the scullada reached back and dabbed his fingers against the marking paint, then sniffed his fingers.

"Only paint," she said. *He thought he was bleeding.* The bladder had bruised him. "Well?"

The creature shivered, watching her. She went to her tent and got out large sugar crystals — most vegetarians and omnivores liked sugar. He was gone when she got back, so she left the sugar near the water. In the morning, where the sugar had been, she found trimmed cattail roots and an ice-abraded Canadian coin.

Litta decided to check the lodges again, to see if the sculladas had truly abandoned their little town.

The lodges were still empty. Litta dove into a lodge and began piecing together the slate shelves the sculladas overturned when they left.

She heard water splash, echoed in the entry chamber, then heard claws knock against stone. The male scullada with red paint on his rump slithered toward her. Litta kept her hands low and didn't look directly into the creature's eyes. He stopped.

I'll call him Sasha. She remembered another Sasha, a red howler monkey shivering in a freak Yucatan snowstorm on her first field trip. "Sasha," she said aloud, finally looking at him in the eye.

The creature bleated through his nose and bobbed his trunk.

As they stared at each other, Litta sat down, very slowly, and held her knees to stop her shakes. She felt the way she did when she first met a Cheshee — that sense of conceptual kinship despite the alien's pebbly hide, awkward angled legs and arms, and eyes like calculating stones.

Sasha tore the stone shelves down again.

They don't want us to know they're intelligent. "I'm sorry I made you leave your nice house," she said. The scullada lay among the shelving rocks and

moaned. *I'd rather be fellow sapients with him than with a Cheshee.* She shined the flashlight over all the tumbled stones that resembled Orkney Island Neolithic human relics. "I'm gone now," she told Sasha, then she whistled to warn anyone else in the tunnel that she was coming out.

The pilot came back with Stonemarker, who seemed more alien than Sasha now. Both waded through the calf-deep water between the rocks and the pontoons. Stonemarker in oiled hide boots, the pilot in foam-skin leggings. "Come back," the pilot said. "This study's aggravating the locals."

"Sculladas are sapients," Litta said. "I've made contact with a male."

"He talking yet?" Stonemarker asked.

"No, but we've done silent trade on sugar." She told the pilot, "Drop me about twenty pounds more rock sugar and some chocolate."

"We want to take you out August first."

"It won't freeze up hard until September. Tell Mason. Take this stick and the stone with you."

Stonemarker looked at the bag and said, "My scudder pet, Skin Head, he don't approve of your scudder."

"I think they're as smart as men."

Stonemarker waded to the plane, then said, with New England twang and Eskimo in his accent, "Men-things got honor rights." (Or did he mean *rites*, Litta wondered.) "We and them do what we have to. Just like we always done."

She asked, "But is it really necessary?"

Stonemarker ignored her. The pilot unloaded Litta's supplies, then waded back to the plane himself. Litta, her boot against a pontoon, shoved them off. The engine cut on, and the plane wheeled into the wind.

Sasha surfaced about fifty yards from the rocks and tilted his head to watch the plane leave. Then, as though the scullada was trying not to startle Litta, he paddled, hardly roiling the surface, to shore around 20 feet from her and hauled out.

Since their niche is so transitional, they sell themselves as game animals to be moved from planet to planet. And on some planets, creatures like Stonemarker know sculladas are sapients, but still hunt them.

Bleating softly, Sasha looked directly at Litta, then as though he was exhausted, he sighed and wriggled over on his side to sun his belly.

Wonderful creature, Litta thought, wants to put me at ease. She stripped to panties and bra to get some sun herself. The scullada twisted his head to stare at her, then as she lay down on a warm patch of rock, he closed his eyes and muttered through his trunk, bubbling little sounds. Litta saw a bite on his hind flipper and noticed that the marking paint had been scrubbed half-off. *Skin Head really does not approve.*

She fell asleep and dreamed of Yucatan, then jerked awake when Sasha trumpeted. Trunk curled down, he faced the water and bobbed up and down

on his hands and hind flippers.

Another scullada trumpeted back from the water. While the sculladas screamed at each other, Litta ran to her tent and got the trunk rifle. Sasha wiggled backward. Litta exchanged the trunk cartridge for a radio implant.

The other scullada, black and grey, exploded from the water, spray flying. As he bit Sasha's hand, Litta saw his hideous head, the scalp — pink scar tissue — flushed almost crimson. She shot and placed the cartridge in his shoulder. Then she ran up to the two sculladas, screaming, "No!"

The two sculladas froze, then the scarred scullada pulled his teeth out of Sasha's hand and slowly turned toward her. Sasha moaned and whistled through his trunk; the other one pressed around the radio capsule entry hole, staring at her. *Burn scars — oil fire burns heal like that.* Even his trunk had been burned once, his hands. *Stonemarker's Skin Head.*

Litta slowly moved back and picked up her first-aid kit while the radio-tagged Skin Head shook himself and made a sound like lips flopping together.

Sasha hunched toward her awkwardly, his left hand bloody. Litta put her hand on his shoulder, wondering if he'd let her touch the hand. He closed his eyes, and she knelt down and gently spread his fingers, cleaned the cuts, and sprayed on a microporous bandage.

The other scullada watched intently, but backed away when she finished with Sasha. Sasha whistled. Skin Head humped up slowly toward Litta, air hissing in and out of his trunk, then snatched the bandage spray from her hands before backing rapidly, hunch, hunch, toward the water. There, he pried out the radio cartridge with a stone flake and called sharply to Sasha, who crept toward him.

Skin Head and Sasha slid into water, then five more sculladas spy-hopped from offshore, necks straight, backs arched, the eyes facing her from the tops of the skulls. One was silver and black. Slowly, they sank down, trunks and eyes just breaking the surface as Sasha reached them.

The second grey-and-black-striped male swam close to Litta, and waited. She didn't move. Finally, he began cruising, eyes out of the water, down the Mohawk channel, toward the monofilament nooses.

When Litta swept the radio antenna around the shoreline to find the cartridge, the radio beeped faintly. The little transmitter beeps faded — the sculladas had taken the cartridge.

Litta loaded the boat and set up the telemetry antenna. A fine rain began when she was about two miles from camp. Litta covered herself and the boat with a rain cape and continued to row, oars swishing wetly against the rain cape edges, as she guided herself by the radio signals.

Finally, with binoculars, she spotted a scullada colony like a collapsed log-cabin town in the rain. Litta pulled the rain cape back and raised the direction-finding antenna. The receiver beeped loudly.

Carefully, she looked for scullada signs in the water with her binoculars,

tilting them down slightly to keep the rain off the lenses. Then she dressed in foam skins to go diving.

Litta set the mirrors on her face mask so she could see up and down. The water was clearer here than around the old lodges — not so much glacial rock sediment. Swimming just above the muck, a small receiver in her ear, she followed the beeps toward the edge of the scullada village.

Beep . . . beep . . . Beep . . . BEEP . . . BEEP. The water was shallow here. She raised one of her mask mirrors barely above the water and saw Sasha tied to a pile of stones.

The tying seemed symbolic, plant-fiber cords around his hind paddles, his hands free. The radio cartridge lay on a rock beside him. The sculladas had set out Sasha and the radio as a trap for Litta.

Glad of the rain and oncoming darkness, she swam slowly back to her boat. *This is not like working with naïve wolves*, Litta thought as she set up a sonar alarm before lying down to sleep on an air mattress.

The sonar alarm woke her at first light — Sasha clung to the johnboat, reaching for the alarm box. Litta turned it off and touched Sasha. He grabbed her and tried to pull himself into the boat, making lip-flopping sounds with his trunk.

Other sculladas raised their trunks out of the water, still swimming rapidly toward the boat, eyes just above their ripples, talking in whistles and burbles.

“Oh, baby, what have you gotten us into?” she asked Sasha as she hauled his thrashing body into the boat.

He grabbed the oar handles, then let them go, pointing with his trunk at her hands.

“We wouldn’t be fast enough.” She watched the other sculladas yell at Sasha. If the sculladas wanted her dead, she was dead. “Poor baby, those ropes bruised your feet. They must think you’re a really naughty boy.”

Wondering if these guys took bribes, Litta eased a piece of chocolate out of her duffle and offered it to one of the sculladas near the boat.

The scullada tasted the chocolate, then, with a low whistle that ended in a flabby nose-tube splat, tossed it to Sasha. He caught it and tucked it back in the duffle, awkwardly opening and closing the zipper with his clawed hands.

But to do that! Sasha had either observed her more than she’d known, or he knew how a zipper worked from one watching.

Another scullada spoke. Sasha shivered. Then the sculladas in the water began staring over Litta’s head, to the southeast. Sasha patted Litta and popped out of the boat.

Litta heard an airplane, behind her, coming from the channel. At first, she thought it was the university plane, but then she turned and saw it was red, not silver. Quietly, the sculladas submerged. The plane dipped, then circled the lodges and came back, landing, taxiing across the lake.

Stonemarker, with a silver and black scullada prone on a rack beside him, drove the plane toward her. Litta stared into the man's impassive face as he heaved a rock at her johnboat. The gunwale split, and Litta saw the scullada in the plane raise a smaller rock. The scullada's head was hairless — pink warty skin behind the eyes, and the trunk mangled. *Skin Head, again.* She stared into his alien black eyes for seeming hours until the stone struck her.

Half-light. Warm bodies. Stinking fur. Horrible headache. Litta rose up on an elbow and turned her head. A grey scullada and Sasha lay on either side of her. Light came in through holes in the lodge chinks. Finally, Litta saw her duffles and canteen, brought in from the wrecked boat. She moved to get up, but her ears ached and she felt nauseated.

Dizzy when she tried to sit up farther, Litta said, "Water," the word echoing absurdly in the dimly lit chamber. She reached for her canteen. "Take it, fill," she said to Sasha, pantomiming the lake surface, filling the canteen.

Sasha moved to her in two nervous wiggles, sniffed inside the canteen, pointed to the water at the bottom of the ramp.

Litta nodded, then pantomimed drinking, pointing to her mouth. Sasha stared down the canteen's neck, then slithered down the passage and brought back a full canteen.

Litta drank from it, hoping scullada parasites didn't infect humans. The grey scullada slid down the ramp and came back with a trout. Giving the fish to Litta, the grey female made a sound with her trunk that Litta tried, in vain, to duplicate.

"I'm going to call you Mina," Litta said to the grey female. The trout thrashed, and Litta dropped it. Sasha bit it behind the eyes, tore a hunk of flesh off the spine, and gravely handed it to Litta. Suppressing a shudder, she ate it.

Mina pushed Litta back down against the beaver furs.

The sculladas fed Litta raw trout, inner bark of spruce, and roasted cattail roots the first hazy week. By the second day, she realized she was close to being winter-stranded, but was too weak to swim out of the lodge. By now, Stonemarker would have reported her dead, killed by sculladas.

"I've got to get out," she said to Sasha. She found her diving skins, but Mina blocked the tunnel with her grey body. Litta realized she still hurt: shoulders ached, lungs congested, boat gone, too sick to walk out.

Both sculladas looked concerned. Litta feared she'd die here, human bones to be found mingled with scullada bones after the Ecological Corp poisoned the colony in the spring. Dangerous to man, that's how the sculladas would look when Stonemarker reported her death. They were smart, but they couldn't have any concept of an Eco Corp attack.

She lay back down on the beaver skin and cried. Through chinks in the lodge, she saw four sculladas digging cattail roots and harvesting cold rice.

The terrain was like that around the lodges she'd checked. The sun sat and rose, sat and rose, while she began to recover.

One windy cold day, the sculladas built a fire in her lodge, smoked beaver skins, and dried grain in wicker baskets suspended from the ceiling poles. At sunset the fire was carefully put out, except for a small heap of buried coals. *These sculladas are hiding.*

Sasha brought up more of Litta's gear from the lake bottom. She went through the muddy cold duffles and took out sealed food pouches, chocolate, foam skins, and batteries for the lamp. And she found a wet muddy cervical cap, cleaned it so she wouldn't bleed all over the lodge during her periods.

Mina brought her leaves to defecate on. Over the weeks, Litta watched the leaves turn gold, then brown before the scullada stopped bringing leaves and brought wet birch bark instead.

September, the ice is in. Maybe I can walk out when it freezes hard. I'm better. I think I'm better.

Sasha urged her to dive through the exit tunnel. She dressed in a double layer of foam skins while he rolled to his side and twined his fingers together nervously. Then she slithered down the exit ramp, with him following.

The skins protected her from the water, but the air, when she broke through the thin ice, made her gasp. Snow whirled against her face, into her eyes.

Mina handed her a stone grubber and showed her how to dig for roots in the marsh. She, walking, could reach inland plants they couldn't harvest from the canals.

The commensal beavers felled young trees, dragging them to the water where the sculladas gave them bits of Litta's chocolate and took the tree tips — spruce bark against scurvy. The beavers shied away from Litta, slapping tails against the water.

As the weather got colder, the sculladas kept fires going through the night. The fire went out in the lodge once, and Sasha gravely strung together milkweed cord on a limber stick to make a bow drill. He rolled to his side and whirled another stick with it to start birch punk burning. Mina taught Litta how to fray plant fibers and spin them on a hooked stick, winding the spun cord around the stick, then rolling it again along scullada body or human thigh.

Before the ice froze hard, a moose ambled out in the lake, dipping his large head down for water plants. The sculladas whistled to each other, then dove underwater, all disappearing except Sasha who stayed by Litta. Then suddenly, they surfaced, screaming and bugling through their trunks, throwing stones. The moose reared in the water as sculladas grabbed its legs. Then it kicked back twice and began to swim away, head and shoulders breaking through the thin ice. It stopped as though snagged.

The moose screamed once, then rolled from side to side in the water. Finally, head limp, the moose only twitched as the sculladas dragged it to shallow water. There, they hacked it to the bones with flaked stone knives. Both the males and females pounded the meat with sticks over logs, flattening it before drying it over the fires. Litta helped Mina pack the fat in birch bark wrappers. *Will moose give them gas?*

Soon the beavers moved into the scullada lodge, sleeping by the fires like flat-tailed cats. The sculladas spent a week frantically gathering more roots, then came inside and began drawing diagrams on the mud lodge floor, occasionally moving a beaver away from the firelight. Singing weirdly, they moved fish vertebrae on the diagrams.

Games. "We're both intelligent," she said sadly to Sasha, "but we're going to die if I don't get out this winter, stop the Eco Corp." She put more sticks on the fire and watched him play.

Sasha and a visiting male finished one game, then Sasha dropped his eyes and drew another board. The visitor juggled the counter vertebrae, humming until Sasha finished.

As they played again, Litta analyzed the moves.

Sasha lost two games. He dove out through the exit tunnel and came back with arms full of roots and tree twigs as the other male smeared the cross hatches and circles of the game board back to plain mud.

Over the next week, she kept watching. More than one game — and males and females played each other, neither sex seeming particularly superior. Mina and Sasha both lost some, won some, from both sexes, but never played each other. Losers did the chores.

When the sculladas weren't playing their games, they sat chewing roots and strips of dried meat, constantly talking, whistling and blubbing as they both inhaled and exhaled.

We're safe until ice-out. Litta decided to horde dried fish and beaver fat, to feed her on her trek for help. But sculladas other than Mina and Sasha watched her, stole back the one cache she thought she'd hidden well enough.

One day, Sasha brought Litta two pairs of her foam skins, pantomimed that she should put both on.

They swam out, rising to breathe in chiseled spaces in the ice. Wind had stripped snow off the ice and the sun glowed through, fractured into rainbows that bounced on the water. Litta turned her face up, nose and mouth barely out of the water, breathed deeply in and out. Sasha was restless, ready to dive again, but Litta needed more air.

Back through a dark tunnel and up an entry ramp, Litta came face to face with a grey-and-black-striped male who held a stone lamp in mutilated hands. *Skin Head?* Her stomach spasmed, then she saw his scalp was nor-

mally furred. Broken, then set wrong, the scullada's hands twitched as he put down the lamp — Litta was one of his demons.

Sasha bleated and handed her a lump of maple sugar. Gravely, Litta offered it to the crippled scullada who took it awkwardly and touched his surprisingly dark tongue to it. "Ah," the striped male sighed as he lay the sugar aside, twisted one hand against the other as if trying to straighten the crooked bones.

The monofilament cuffs around the fly had not caught this scullada low enough on the wrists, Litta realized. So he'd pulled free, and the others kept him alive. *Two black and silver survivors — Skin Head and this one.*

Sasha murmured to Litta. As she turned to leave, she suddenly realized that he'd conditioned her to respond at a reflex level to basic signals — *come, don't move.* He handed her a maple-sugar lump now. She said, "Thank you," and broke off some for him. He whuffed.

One day, suddenly, Litta realized that she stank, that her hair was matted. Two beavers lay on their bellies by Litta, licking her hands from time to time. "I'm going mad," she announced to Sasha and Mina who lay together on beaver pelts. "If I go mad, I can't get help."

Sasha's snout writhed up as he wiggled to Litta and touched her head with his hand. He tried to smooth her hair. "I'm insane," she said, sure he understood.

He lowered his nose and picked up a fish vertebra and made a noise she couldn't hope to duplicate. She held up one stone.

Sasha hooted gently, then stroked her hair again. She then said, "One," holding up one stone. He couldn't say *one, two, three*, but he recognized the words, holding up one, two, and three stones or vertebrae.

After they learned *one, two*, and *three*, Litta felt saner. She stroked Sasha and felt hair coming off on her fingers. Under the shedding old hair was darker new hair. She turned on her lithium lamp. Black and silver grey coming in, very fine short hair.

Mina humped over, saw the new fur, and squalled.

Sasha shuddered, the shudders becoming bodily wiggles. He faced the wall, writhing. Mina, her trunk bobbing up and down, brushed the loose hair off and held him in her short arms, then both sculladas talked urgently, interrupting each other.

Litta began to cry, tiny tears as though she'd dried up under the ice.

"Manhattan's like an essential enzyme," Litta heard herself saying to Sasha weeks later. "We need it. We're going to kill the ice with iron dust, buy back the world." She reached for spruce bark, craving it now. "We have to keep our culture going." Sorry that they didn't understand, she picked bark fibers from her teeth. Mina pushed some sticks into the ground by the fire, let them sprout pale fantastic shoots which she'd eat like celery stalks.

Litta gobbled them, fearing scurvy rotted her brain as much as the languageless time.

The water rose and the sculladas, with rocks and sticks, banged air holes through the ice. The lodges began to drip, so fires were only lit at night during the warm spells.

The next night, Sasha, rolled on his side, shook her. He thrust her extra foam skins at her, bleating. *Hurry, hurry.* As she was dressing, Mina lunged through the entry way and threw Litta down, covered her with beaver skins as another scullada came up the entry way.

Skin Head! As he stared at them and blinked scarred eyelids, Mina panted through her trunk. Skin Head wore a harness with a knife sheath. Slowly, his pink head flushed dark, and he spoke to Sasha, pulled out cords, and measured Sasha, knotting the cords at the measures. *Skin Head brokers other sculladas, sends them down to Stonemarker's camp.* Sasha lay quivering as Skin Head felt his fur, stuck his fingers down into it. Sasha's fur came up to Skin Head's palm. Skin Head gave a satisfied hoot.

Litta stared through a gap in the pelts. Then, fearing Skin Head would see the glitter of her eyes, she closed them and locked her muscles.

Skin Head oooched over the mud lodge floor, trunk sniffing. Litta heard him, almost on top of her. She opened her eyes into his horrible liquid black ones as he jerked out his knife and stabbed into the furs.

She twisted. Sasha heaved his body toward Skin Head as Mina jerked Litta away, hustling her down the exit ramp, through underwater brush that scratched Litta's face and snagged her foam skins. Mina pushed her under an ice-embedded log. Litta surfaced in blackness and waited.

When the wet hand went over her mouth, she thrashed. But light — her lithium lamp, in Sasha's hands. He wore Skin Head's harness pack, with Skin Head's knife on it, a faint pink in the water around him. He tugged her and turned out the lamp.

They swam under ice for miles. Litta's lungs strained even though Sasha let her rise to icy air bubbles when she needed, where there were air bubbles. Finally, she saw a dark shadow on the ice. Sasha circled it, then swam to a creek mouth where he chipped the ice open with the knife and hauled out. Lying flat on the ice, he lowered his arms to help Litta out.

It was another world on top of the ice — bright ice and snow, black rocks above the glaciers, willows and cedars dark against the snow, a huge blue sky full of hidden stars capping it all. And the wind hissed in her ears.

Both rolled in the snow quickly to dry off. *His coat really is splendid,* Litta thought, seeing the black and silver fur spring up as the snow and wind dried it.

He looked up at her, as if wondering what to do next, then back at the hole in the ice. Making a moaning sound in his trunk, Sasha slid along the ice and snow toward where they'd seen the shadow from underwater. A black

machine was frozen in the lake's surface, a trapper's amphibious ice cruiser, big enough for freight.

Sasha lifted his snout at Litta, touched his fur, and looked one final time at the hole they'd come through, 30 yards behind them. Litta checked the cruiser's batteries. Dead, but under the snow she found sails and an aluminum collapsible mast. Litta and Sasha chipped at the ice, rocked the craft. The ice holding it cracked, and one pontoon skye tilted up.

"We have to get it up on the ice to travel," Litta said as if Sasha could understand. "It makes terrible time in float water."

Sasha heaved, and the machine skidded forward a few feet, dangling half over water, half on ice. Litta crept forward on her belly, grabbed the bow rope, and hauled the cruiser onto firmer ice. Sasha watched, then helped her pull, claws shoving backward.

The cruiser's owner must have died in a winter blizzard — Litta found sleeping bags, food, and a navigator with dead batteries in the cabin. Using the knife, she chipped the outrigger and sail cleat free of ice, then stepped the mast, guyed it, and set the sail in the boom.

Sasha looked up at her from the ice, then reached for her. She grabbed his wrists, and he clambered in, scrabbling against the cruiser's side with his clawed flippers.

Litta found a hand generator, cranked until she got a screen display on the navigator. Stonemarker and his pet scullada had tried to kill her, so she'd avoid the Catskill Archipelago. The nearest sizable town away from the Catskills was Pokeeps, down and across the old Hudson Channel. They sailed downwind, then Litta headed the boat toward the Taconics when they came out of the Mohawk Channel.

For three days, they sailed, floundering through the thawed patches. Litta wondered if they'd get to Pokeeps before another blizzard and realized she couldn't have gotten out on foot. Sasha, head on the bow, hands gripping the rails, stared at the ice, the black trees, trembling occasionally. Litta worked the tiller and melted chunks of ice on a small stove with the white gas that remained on board.

Finally, Litta sailed the ice craft into a pleasure-boat marina at Pokeeps. A dockhand came out in the little crisp white canvas and fiber-filled parkas that those people wore. Sasha trembled, muttered to himself, then almost tumbled down the cabin stairs, humping furiously away to hide. The dock attendant stared at Litta, and she knew then how smelly she'd be when she thawed, with matted hair and mad eyes. "Phone?" she asked, twitching at the sound of her own voice, disappointed when he didn't speak, just pointed to the marina store.

She went in, suddenly chilly despite the foam skins, and asked again, "Phone?" The ice sailors, in pretty winter pastel foam skins and nylon parkas, stared at her. "Spent the winter out there," she said, wishing someone

would talk to her — almost as bad as being with sculladas.

"Phone's there," the counterman finally said, pointing.

She tapped in the university credit code, then called Mason. "I'm not dead," she told him. "Call off the Eco Corp. Have Stonemarker arrested — Skin Head. Skin Head's a scudder. He and Stonemarker tried to kill me." Her voice sounded croaky.

"Where are you? The Catskillers reported that the sculladas killed you."

"No, Icebreaker at Pokeeps," she said. "Get us out before we're killed."

"Sapients? I killed one, you know."

"Damn, get me and Sasha out. Feel guilty later, okay. Let me tap credit for food. I'm starving. Mason, good to talk to you, very good."

"Phone credit's arranged. Who's Sasha?"

"Scudder friend. Saved my life. Taught me numbers."

She sat down at the counter and ate coleslaw, then bought a half-gallon of slaw and two pounds of trout for Sasha, wondering if he'd eat it.

He came out of the cabin slowly, then shrugged, several times as if trying to loosen his shoulders, then he wiggled his proboscis tips over the cabbage. Litta patted him as he gobbled the fish and slaw, raking it in with both hands, not having to stop to breathe. A couple of the sailors watched. She felt nervous, as though humans were her natural enemies, too.

"Scudder?" one of the men asked.



"Yes," she said. "You can't kill them. Like killing people. Ice-lake people."

Sasha said the scullada word for "one," and Litta held up one finger. Then two. *Tell them, Sasha, you little deformed spaceperson.* She laughed. Hard to think of them as aliens, they were so primitive. Not like the Cheshee.

"Talks through his nose," she explained.

"Come in with him. Freezing out," the counterman said, having come to see what was going on.

"We found the cruiser on the ice," she said. "If you know the family, the human's dead. Don't think . . ." *Did Sasha kill the human to get the cruiser?*

Sasha didn't want to come in, but followed Litta, bleating nervously at the men, shuddering, whipping his trunk around.

"They're sending a chopper," the counterman told her. "Be here in about an hour, so you can shower, put on clean skins."

"Can't leave him," she said.

"We won't hurt him. Promise. Check yourself for frostbite. Here's ointment, fresh clothes."

Sasha hunched over to two men playing checkers and rolled upright in a corner to watch them. "He'll beat you if you teach him," Litta told them. Her voice seemed to echo; the other human voices clotted her ears.

In the shower she cried, from exhaustion, from sheer funk, for dead and maimed sculladas, for herself, then combed her hair and put ointment on the various sores she'd gotten sitting all winter long. *Did Sasha do this to get me out or to save himself?* Then she dressed in fiber-filled pants, a polypro undershirt, and a parka.

Sasha *was* playing checkers with the men when she went back. They'd helped him up onto two chairs set side by side so his head could droop down. He'd propped himself up on one elbow and moved checker pieces with his free hand.

"He plays like his life depended on it. Lost a game and seemed like he was going to fall apart," the man playing with him said.

She went up to Sasha, and he hugged her hard, his heart pounding under the beautiful fur.

"Chopper's coming," one of the men said.

Mason himself had come with the pilot.

"Sasha, show the man three."

The scullada held up three fingers, then picked up three checkers.

Mason looked gravely at the scullada. "I'm sorry if I killed a sapient," he said to Litta. "But it could be just conditioning. Did you learn more than numbers?"

"No. The phonemes are difficult," she said, feeling more complex thoughts flowing from a just-thawed portion of her brain. "I'm not even sure I could hear all of them."

"Sure you weren't signaling him? Unconsciously?"

"But he can play checkers."

"Well, let's sedate him for the trip to the city?"

Mason got the needle in before Litta could protest or the scullada could slap the human's hands away.

The scullada fussed as the drug took effect, bobbing his trunk at both of them, then as he began to go limp, he reached for Litta. She felt odd, almost guilty. Mason smoothed down the beautiful fur as they loaded the scullada onto a stretcher.

"Want anything out of the cruiser?" Mason asked Litta.

"No. Talk to me. God, that ice was cold." They climbed in the helicopter by the pilot, in front of Sasha's stretcher.

"Do the sculladas travel much in the winter?"

"No, mostly they play games on graphs they draw on the lodge floors. They have fires, stored food. Sasha took me to see a crippled striped male once. Hands were broken, the snares didn't catch him under his thumbs . . . don't just surrender . . . so he tore free. Then there was Skin Head, Stonemarker's scullada buddy. Burnt, worthless skin."

"Easy, Litta."

"God, I can talk. Do you understand me?"

The helicopter pilot started the engine.

"You think striped males go out as ritual sacrifices?" Mason asked.

Litta looked back at Sasha, unconscious, brilliant in his new fur. "Yeah." She wondered what scullada legends, told from planet to planet, persuaded the black and grey males to die.

"Maybe this is the village atheist," Mason said. "Or coward."

Litta felt her face grow hot.

"Ah, Litta, did isolation make you see more intelligence than is really there?"

When the helicopter landed, graduate bio students loaded Sasha's stretcher on an electric cart. Litta climbed in beside Sasha and held his hands. He began moaning through his trunk. Then he stared around him, wildly, body writhing. Before Mason could sedate him again, he shuddered and closed his eyes tightly, breath whistling in and out his long nose, little pseudofingers at the end of it twitching.

"Sasha," Litta said, stroking him. She almost felt the same shock, going from stone age to an electric world so quickly. *But is he intelligent, really intelligent?*

Eyes still closed tightly, he took one of her hands between his, trying to roll over on his side.

Mason prepared another injection, but Litta said, "Don't."

"If he behaves," Mason said, putting the charged syringe on a shelf under the stretcher.

Sasha hummed through his trunk and tried to sit up, but Litta was afraid to loosen the straps, suddenly seeing him as an animal. *Funny, he was like a person all the time in the lodge, but now that I'm back among humans, I'm nervous.* The scullada looked down at his fur, then pulled at it nervously as though he wished it would shed back to less lethal grey.

Technicians and post-docs X-rayed him. Litta felt him tremble, but he stayed where they put him throughout the series.

A technician prepared another syringe. "Dh'n't," Sasha said through his trunk: "Doon't." Three techs and Mason held him while the first tech injected him.

"He was trying to tell you not to," Litta said. "Language."

The technician who'd sedated him took tissue samples with a trocar and cannula and pushed a fiber-optics tube up the trunk to examine Sasha's vocal organs.

"Complex, really complex," the tech said.

They arranged a cool room for the scullada, with a swimming tank. Litta thought Sasha might want a hard foam pad near the water. So while the technicians went to get one, she sat with him, he still unconscious, bleeding slightly from a biopsy puncture over his sternum.

As Sasha regained consciousness, he beat his fists against the gurney. Litta lowered it so he could get down to the floor. Weakly, he crawled off and walked around, hands and feet curled sideways, looking and sniffing at the room.

"He'll eat soaked grain, roots, fish," Litta said. She felt weak and hungry, exhausted to the point of quivering.

"Come on, yourself. We need to make sure you're okay," Mason said.

Poor Sasha, Litta thought dizzily, *so small when I'm standing up.* When Mason took her arm, the scullada lunged, open-mouthed, at him.

"No," Mason said, sharply as though to a dog. Sasha rolled up to sit on his hindquarter, pushing one hand against the floor, and moaned through his nose, then dropped, grabbing Mason's pants leg with one hand and beating the floor with his other.

"Let me stay with him," Litta begged. "Bring me a bed in here. He knows me." Sasha watched her, still holding Mason's pants leg. Then Sasha reached up for Mason's belt and pulled the human down to his eye level, the great furry head cocked down so the eyes looked straight at Mason's. He whistled and made strange flabby sounds with his trunk, then shook Mason's belt and turned away, crawling across the floor toward the water tank. Then Sasha stopped, stared at the floor, and tried to scratch it with his index claw nail.

"They draw game maps on mud," Litta said.

"With their hands or with sticks?"

"Sticks," Litta said, remembering the challenge games the sculladas played with each other in the lodge.

"I'll get pencils, paper," Mason said.

"Tomorrow. I'm tired of all of this."

"We'll get a bed for you, heated roommette inside this one," Mason said. "And steak and potatoes?"

"Wonderful," Litta said, positively zinging with exhaustion now. Sasha slid into the pool and swam in tight circles until Mason left. Then he came back out of the water and patted her ankles gently, rubbed his long nose against her legs.

"Hoo-kee?" he said.

"Okay? "I doubt," she said to him, "you had any idea what you were getting into."

In the morning, Litta opened the roommette door and saw Sasha leaning against the waterbed frame, drawing with a pencil on paper, touching the graphite lines with his fingers. Mason and a Cheshee, leathery body wrapped in foam skins, sat beside him.

She closed the door and dressed, then turned down the temperature controls and went out. "Doesn't leave a groove in the paper, does it, Sasha," she said.

"Ah, exchanged student, the Norte bitchy one?" The *b* sounded breathy, almost a *p*. Exolinguist Carplel with the tattoo of a Terran rose between his eyes — Litta remembered him from Mexico. "You think these are intelligent enough to matter?" the Cheshee said with cold lizard slowness. "We tested, non-response. You . . ." He stopped and stared with unblinking eyes at Sasha.

Sasha drew ovals. Ovals, like ovals of monofilament, and hands. He felt the lines again, looked at them, then handed her the paper and pencil, and sighed.

"Litta," Mason said, "if he was the village atheist, he seems obsessed now by their faith."

"Sapient?" Carplel asked, the rose between his eyes narrowing in wrinkles. "Imported by us through a whirling black hole, but in that universe/space five sapient kinds hunted them. I tell you we tested."

Sasha reached for the paper and pencil again and drew a scullada children's game board, one of the games he'd taught Litta. He slid it across the floor toward the Cheshee. Litta said, "He's challenging you, Carplel. That's a child's game among them."

"You also challenge, jealous. Don't you know Mexico affords us better than the glacier-stressed regions."

"Let him teach me," Mason volunteered. Carplel turned his broad face toward Mason and blinked agreement.

The scullada slapped the floor and hooted when Mason sat down beside him. He tore up the game board sheet and began again to draw double loops and roughly sketched hands, staring at his own hands from time to time as

he drew. Then he handed the new drawing to Carplel.

"Oh, baby, no," Litta said, exhausted suddenly, despite a night's sleep.

Carplel pulled a photograph out of his Mexican cowhide briefcase. Gingerly, back joints and strut bones creaking, he bent down and showed Sasha the picture. Sasha stared at Carplel, at the photo, then took it and strained it against his trunk. The trunk fingers writhed over the photo paper. Carplel said, "His lake. Wants to go back."

Litta cried, "He's not just an animal if he can read abstractions." Sasha dropped the photo.

"Apes can read pictures," Mason said, "but we don't give them sapient rights."

"Don't understand human reluctance to accept Cheshee animals when humans transport wild boars and brown trout over all Terra," Carplel said.

"Whether he's animal or sapient," Mason said, "he has to live his own life. Maybe they die when they reach this stage?"

"I saw two striped ones, the one who tried to kill me and another with healed mutilated hands in the colony," Litta said.

"We will try language contact protocols," the Cheshee said. "Then return to his lake."

Sasha drew monofilament cuffs and laid his wrists against them, his nose bent back to stroke his mouth. Litta decided she'd sedate Sasha, implant a radio transmitter, if she could do it without either the scullada, Mason, or Carplel noticing.

When she went into Sasha's pen to see if the transmitter stayed in place, Litta saw that his fur around the eyes was matted with oil. Her little radio box beeped. Like a child, he reached open-armed for her. She put the radio down and embraced him. "I'm going to catch you," she said, "if you have to be caught for the good of your species. I'm going to make you live."

He slipped slowly into the water, the fabulous coat dulled now, loose over the wasted body. She knew he wasn't eating and felt obscurely insulted, cheated.

The university helicopter airlifted Sasha to the scullada village and lowered him down. Litta watched from the air as he slithered off the stretcher into the water. Eyes above the surface, he began swimming steadily south.

The helicopter returned to the guides' port. "Come see this, bitch," a Catskiller called to her.

Litta followed, but stopped when she heard the wailing women. She knew. "Stonemarker's dead," one of the guides said. "He hanged himself rather than take a court disgrace."

Litta had a sudden vision of Stonemarker, the strange blue eyes in the almost Eskimo face — dangling from a rope. Nooses, pride, rites — she hated them all. She walked up to a man practicing casting on the dock and

watched the big 10-foot rods whip through the air, the stiff monofilament leaders turn over, drop the huge flies and wrist nooses on the water.

Should I let Sasha die?

"We're gassed up again," her pilot said, ducking the giant feather lures that whistled by.

"He saved my life, that scullada, and now he's going to throw his away?"

"Cast for him yourself, then, bitch, and keep him alive like a crippled old man," the fisherman said.

She got in the cockpit with the pilot, and the men around them backed off as the rotor blades began turning. "He's not old," Litta said before she realized she really didn't know. *Just my impression.* "Call Mason, get me money to buy Sasha from whoever catches him. I'll do anything he wants." An image of herself and Mason naked blew through her visual cortex.

The pilot made the call as they flew northwest. "Mason wants just to be your boss. He'll cover buying whoever catches him another scudder license."

The receiver began picking up the beeps from Sasha's radio implant. "There, that island," the pilot said.

"He's hauling out, with a bag."

They saw the sculladas, tiny below them, creeping toward the firs.

"Closer," Litta said, "go closer."

"What's he doing?"

She saw Sasha dig through the bag. "Marking gun." For an instant, Litta thought he'd shoot himself. At so close a range, the bladder could do him considerable damage. But Sasha fired it on the rocks and rolled in the red dye. After five minutes, he touched his fur and then plunged back into the water.

The helicopter circled over him, flattening the tiny vee of wake rippling behind his head. "He's not in shape for this," Litta said. He swam slower than the other scullada stripers she'd seen.

They saw the boat waiting for him, in the open water.

"Sasha, don't," she screamed. The whole planet seemed to wobble. "Go down, go down," she told the pilot. As the pilot came closer, a fisherman cast his fly. Sasha swam loops around it, as though he traced out giant cuffs around the smaller ones.

The helicopter landed on pontoons. Sasha looked over at it, then, without touching the fly, stuck one hand, then the other in the loops.

Both Sasha and the man tightened the cuffs, slowly drawing away from each other. Before Litta fumbled out of her seat belt and shoulder harness, the scullada took several deep breaths and sounded.

The pilot cut the engine. The only sounds were waves slapping against the boat and the pontoons and the reel clicking as Sasha sank.

Litta stared at the rod, bent and quivering, the line pointed straight down. *He's so thin.*

Then the rod bounced, the line went slack, and the man reeled in furiously. Sasha came leaping out of the water, twisting, his hands wrapped around the line above the cuffs. The *smack* when he hit the water coming down deafened Litta.

"Bid on your rod," the pilot said. "Buy you a new license. That scudder seems weak."

As from a great distance, Litta heard Sasha bellow as he twisted up through the water again. He smashed into something floating in the water — a log, dirty ice. She realized he could die before he got the gaff noose around the snout. "You creep," she screamed at Sasha. "We saved each other."

Sasha stopped for a moment and stared at her. Then he sank. His eyes disappeared under swirls of agitated water.

The fisherman jerked the rod, then began to pump. Sasha's fingers splashed out of the water; he'd lost his grip on the line above the nooses. He faced the fisherman, sputtering when his trunk drifted below the surface.

The fisherman's guide maneuvered the boat closer to Sasha who raised his grey-and-black-striped shoulders above the water, his trunk limp, floating on the water. The guide reached for it with the gaff noose, a loop of stout rope on the end of a pole.

"No," Litta screamed. "Don't. Please."

The fisherman's guide pulled the rope tight around the alien's snout and turned him in the water. "Fur's messed up," he said to the fisherman.

Litta dove out of the cockpit and swam to the scullada, pulled the rope off, and began breathing in the cold snout. "Don't die. Not for some bitch's jacket. Don't . . ." An obstruction. "Wash out a gas line, ball-point pen, something."

The fisherman's guide handed her a pipe stem.

She pushed it down past where the rope crushed Sasha's nose cartilage, and breathed into the nose tip, like a ragged clay tube against her lips. "I'll trach you," she said between breaths. "You've done your damn ritual. Live."

Another scullada swam up — the grey female, Mina — freed Sasha's hands from the nooses, and helped Litta hold him up, scolding him in scullada language.

"I've got him breathing again. I'll pay for another hunt, a moose hunt, lions, anything," she said to the man who'd caught Sasha.

"All I want's a fur, and he's got some damn red stain."

"Litta, get out before you freeze," the pilot said.

"Help me get him out."

The guide pulled her out and took her to the helicopter. She tried to get back in the water, but the pilot held her and wrapped a thermal heat blanket around her. "We'll take him," he told her, "but you have to drink some coffee first."

Mina held Sasha up, her eyes jerking as the humans approached. Litta watched as the men rolled Sasha out of the water onto a stretcher and rowed him over to the helicopter. Mina cried from the water as the men put Sasha in the back of the cockpit.

Litta looked at him. His trunk was swelling; his right shoulder was dislocated. Mina called to him, but the tube kept him from being able to answer, the breath just whistling in and out in jerks. "She's got to come, too," Litta said, beginning to shiver again.

Mina clung to the pontoon, moving away from the men as they tried to catch her, but surfacing and clinging to the pontoon, always looking toward Sasha. Then finally, trunk twisting, hands shaking, she reached for the ladder and tried to climb in.

"Mina," Litta said, stretching out her hands. The men touched Mina's flank. She didn't protest as they pushed her into the cockpit.

"New license, right?" the fisherman asked.

"On a moose, damn you. These creatures are intelligent," Litta answered back.

As the helicopter took off, Mina eased herself upright and looked out the windows. Then Sasha, as painful as his shoulder must have been, pulled himself upright against Mina and stared out the window, neck curled down, trunk held in his left hand. Both of them looked out the window the whole flight; both were utterly silent except for the air whistling slightly in and out of their trunks. Litta touched each of them — light fingertip pats — as the helicopter approached Manhattan. Their heads looked almost painfully cocked as they tried to stare down at the city. Sasha moaned slightly and raised his head when the pressure against his wounded trunk became too painful.

Litta laughed. Sasha didn't *really* want to die.

Sasha rolled over slowly, onto his back, and stared down, holding his trunk in his hands, looking at the grey blocks of city buildings, ice walls, the reactors, canals. Litta wondered what did Sasha think, the world turned upside down around him.

Sasha recovered from surgery in the cold room with Mina. Litta herself spent a few days in the infirmary. Carpiel came in to tell her Sasha'd gotten through surgery.

"I am a bitch, but I saved them."

Carpiel wrinkled his rose tattoo at her and said, "Only he and the female seem intelligent. Others we tested still play dumb."

"If we can prove they're intelligent, we won't hunt them anymore. So they hide that."

"Perhaps they *are* intelligent. If they could earn further life for themselves in slow space, null acceleration. No bone rot as in bipedals. Space is like water."

I should have thought of that. "Until we work out what Sasha and Mina can do, I suppose they'll continue sending the tiger males off to be killed. That's why they've managed to survive in unstable niches. Other species move them around for sport."

"The Catskillers will it. Don't be bitter."

"I'll go see them now."

"Sasha?" Litta said softly. He looked up at her, leaning against a padded V-chair the students had built for him, a chewed-up corn cob dangling from one hand. His nose was still tender, so he waved to her with his free hand. *A student must have taught him.* Mina looked up from a fish she was eating and said the simple forms of the scullada numbers, *bup, shree, p'hab.*

Litta held up one, two, three fingers. Mina shrugged, slowly as if she wasn't quite sure what the human meant by shrugs, then pointed at Sasha, herself, and Litta. *Three of us here, right,* Litta thought. *All three alike.*

Mina hooted softly and wiggled up to pat Litta, who said, "Thanks." She took the scullada's head in her hands and looked into Mina's eyes. "Maybe someday you can tell the others it's safe to talk to aliens." ❁

SPELL FOR A NUCLEAR WITCH

Warp of fire, weft of snow,
'Round the startled cities go.
Pin the heart to burn or freeze
In unnamed calamities.
Twist the strands that make us whole,
Doom the body, seize the soul.
Teach the child that all is bent
Under Heaven's firmament.
Sing of sin and pride and wrath
As the payment for the path
Which, unpoisoned, might have led
To the wonders overhead.
Let them fear to look above,
Lose the knowledge that is love,
Bind the mind and lock the dream
In the compass of a scream,
For if hope should see the sun,
Then our work is all undone.

— Esther M. Friesner

Inflections

The Readers

Readers and writers, take note! Please be aware that all materials — manuscript submissions, letters to the editor, subscription problems — should be sent to our editorial office: Amazing® Stories, P.O. Box 110, Lake Geneva WI 53147.

Many of our readers enjoyed the poem "Note Attached to a Cryogenic Corpse," which appeared in our January 1988 issue. But several readers wondered who really wrote the poem. The author, writing pseudonymously as Death, is William John Watkins, and we apologize for not crediting him accordingly.

Those of you who enjoyed Paul Jaquays' artwork in the March 1988 "On Exhibit" feature might want to know that there was an error in his studio address. The correct address is Jaquays Design Studio, 1126 Fourth Street, Jackson MI 49203.

— Patrick Lucien Price

Dear Mr. Price:

This is a letter from one of your happy subscribers. I generally liked the mix of stories that you put into your last issue. I have been a subscriber for a bit more than a year now, and I am happy at what I have to read. I have some comments to make, though, so I will.

One is that I very much would like to see a regular review section. As a fan and as a librarian, I have found it hard to find good reviews of SF. Most reviews fall into two groups: the fan-

nish "Gosh! Wow!" to whom everything is grand or the professional who looks down on SF as a matter of "stupid kid stuff." Any source of high-quality reviews is welcome and has a real need to appear in *Amazing Stories*.

One other suggestion: I've noticed that you've been getting requests to start running nonfiction scientific articles. I have one word for that: **Don't!** If I wanted to read such articles, I would read *Scientific American*, not *Amazing Stories*. I enjoy many of the stories, but I am mainly a "soft" SF fan, very interested in some of the less "hard" issues. Reading articles about the latest ideas in physics or engineering just isn't that thrilling to me. That does not mean that I completely dislike nonfiction articles. I loved "Adolescence and Adulthood in Science Fiction" by Orson Scott Card. I would like more critical articles about SF, about writing in general, or about SF fandom.

So, as I said, I think *Amazing Stories* is a pretty good magazine. Of all the SF magazines on the market, I like it the most. It is, in my mind, the best buy around in regard to the number, the quality, and the variety of stories you publish. Fantasy, hard and soft SF, militaristic SF, space opera, and humor are all found. Keep up the good work.

Sincerely,
Elizabeth Ann Osborne
425 Wilda Avenue, #1
Inverness FL 32650

Like you, Elizabeth, we prefer critical essays about science-fiction literature, thus the thoughts of Gregory Benford, Charles L. Grant, Roland J. Green, and Orson Scott Card have appeared in our pages. We don't like the usual shopping-list or book-report format of book reviews, as we generally take those reviewers' opinions less seriously than those of Siskel and Ebert.

— Patrick Lucien Price

Dear Mr. Price:

I was saddened but not surprised by your homophobic reader in Sioux Falls, S.D., who claimed that stories about gay characters had "no place in SF."

I've just got one question for this person. How do you expect to ever understand and communicate with an intelligent alien being, should one appear, if you refuse to understand and communicate with that ten per cent of *Homo sapiens* who are lesbians or gay men here on Earth?

Sincerely,
Robin F. Rowland
268 Poplar Plains Rd., #1005
Toronto, Ontario
Canada M4V 2P2

We agree wholeheartedly with you, Robin. Yes, the study of alien lifestyles is a part of science fiction, and we need to understand and appreciate the aliens here on Earth before before we can understand those from another world.

Yet unfortunately, homophobes are more prone to emote than to think. But as we are not like the redoubtable Mr. Spock, such emotional displays will continue to plague mankind, and probably blur our perceptions of alien beings if they ever do decide to drop in for a visit.

— Patrick Lucien Price

Dear Mr. Price:

I just got through reading Robert

Silverberg's story "The Iron Star" [January 1988]. It's a great story in the classic tradition of hard-core SF, with interesting aliens, science, and a choice. I really liked it, and the cover art was excellent. However, I must admit the ending — where the Nine Sparg aliens are tricked into approaching the event horizon of the black star — was not believable. Why? Simply because earlier in the story Silverberg says the black hole has an accretion disk that is flaring in various electromagnetic energy levels, and that the Nine Sparg signal was in IR and UV light. Now, while I like the idea of "cultural blindness" by an alien culture to certain concepts of other alien cultures, this isn't a viable example. Simply, these hyperspace-drive-owning aliens can communicate in the same wavelengths emitted by the black hole's disk, and yet they don't realize the basic fact that stellar evolution of massive, main-sequence O-type stars can result in a black hole? Not convincing to me.

A culture like that of Ming China could be blind to Henry Ford's "assembly line" technique of making cars, but still be able to envision cars. Similarly, ancient Baghdad of 52 B.C. could invent the electric battery, and yet be blind to its motive-force implications.

Despite my concern, this is a very good story. I hope *Amazing Stories* chooses to run more of them to balance out the "modern fantasy" stuff that seems to be common fare these days.

Best wishes,
T. Jackson King
3043 NE Waller
Bend OR 97701

The situation created by Silverberg does not strike me as an example of cultural blindness but rather one of a

loophole in the scientific knowledge of the Nine Sparg. Just because an intelligent person can see a new phenomenon doesn't mean he immediately recognizes what it is. For example, early researchers tinkering with nuclear radiation exposed themselves to huge doses of it without realizing the long-term effects; similarly, early chemists often tasted — not exactly a wise thing to do — new compounds. So, a relatively intelligent race of aliens that can visit other stars may not instantly know what a black hole is and what it can do. Silverberg was merely claiming that at that moment the Nine Sparg were unfamiliar with the nature of a black hole. Surely, we can assume that they'd figure it out at some later date; however, fortunately for the humans, the protagonist used the aliens' ignorance against them.

— Patrick Lucien Price

Dear Mr. Price:

After reading Jack Clemons's story "Will Little Note, Nor Long Remember" (November 1987), I found myself asking the usual battery of questions regarding stories of time travel, to wit: how has the author handled the inherent paradoxes? Has he played fair? Have new "theories" or propositions of time been offered? Has plot taken supreme (and damaging) precedence over science? And if so, was the gamble worth it?

Mr. Clemons's story still troubles me on many counts. (And this is good: the story matters to me; I liked the piece. And yet . . . and yet . . .)

The hero, Wilson, saves Lincoln's life. But he couldn't have done this — not really — not even in SF. Somehow, the facts have to be put right. We need "Will Little Note, Nor Long Remember," part two; the story is unfinished as it stands.

Foucheaux (the guardian of the

Time Node) knew that Wilson (or someone like him) was going to try a stunt like this. And it is now Foucheaux's responsibility to track him down, use the TERMA machine to undo the damage Wilson has wrought, and quietly accept the credit for preserving reality (for lack of a better word).

The author must find a way to preserve historical accuracy and still write the SF potboiler. Mr. Clemons is writing science fiction, not fantasy.

All of this aside, I quite enjoyed the story. Bring on part two.

Sincerely,
Ken Duffin
137 Arthur N., Apt. A
Guelph, Ontario
Canada N1E 4V4

Perhaps, Ken, a sequel to "Will Little Note, Nor Long Remember" would be an enjoyable read, especially if one is curious to learn how the course of history was changed by Wilson's intervention. But as is, Jack Clemons's tale is a thrilling science-fictional one. However, the exact nature of the consequences of Wilson's actions is not the point of this story; rather the story pivots both on Wilson's decision to try to alter the timestream and on his attempts to do so. That history is changed is an acceptable science-fiction convention that has been used in many alternate-universe stories. The human conflict, not the historical one, is what matters most here.

Readers, please continue to send us your letters. We'd like to read about your likes and dislikes.

Till next issue, when we print readers' rebuttals to Gregory Benford's article "Pandering and Evasions" (January 1988).

— Patrick Lucien Price

WE HAVE ONLY GOOD THINGS TO SAY ABOUT CANCER OF THE COLON.

If detected early, the cure rate for colorectal cancer is very high. It can be as high as 75%.

Because we now know how to detect it early. And we know how to fight it once we detect it.

There are three simple checkup guidelines for men and women without symptoms.

One, get a digital exam every year. This is recommended for everyone over 40.

Two, get a stool blood test every year if you are over 50.

Three, after two initial negative tests one year apart, get a procto exam every three to five years if you are over 50.

These guidelines are the best protection against colorectal cancer you can have.

If you're not over 50, please give this information to friends and loved ones who are.

In any case, please help spread the word.

Good news doesn't always travel fast.



Get a checkup. Life is worth it.

AMAZING[®] STORIES

60 Years of the Best Science Fiction

That's right. For over sixty years, **AMAZING[®] Stories** has offered fascinating and thought-provoking science fiction and fantasy by some of the genre's best-known authors. Continuing in this proud tradition, we publish works from among the best writers, including John Barnes, David Brin, Sheila Finch, Ron Goulart, Sandra Miesel, Robert Silverberg, and George Zebrowski.

Enhancing the fiction are book and movie reviews by guest authors, interviews, science articles, and other features, plus stunning artwork by some of the field's best artists — Janet Aulisio, George Barr, Bob Eggleton, Stephen E. Fabian, John Lakey, and Roger Raupp.

(Clip & Mail)

I'm convinced . . . send me my own personal subscription to **AMAZING Stories** starting with the next available issue. (Please PRINT clearly)

Name _____

Address _____

City _____

State/Prov. _____ Postal Code _____

Country _____

Subscription rates for 6 bi-monthly Issues (check one):

- ☐ In the U.S. and in Canada, \$9 per year in U.S. funds **only**
☐ Foreign via surface mail, \$25 per year in U.S. funds **only**
☐ Foreign via air mail, \$50 per year in U.S. funds **only**

Check one to indicate your choice of payment:

- ☐ Personal check enclosed ☐ MasterCard
☐ Money-order enclosed ☐ VISA

Credit Card No. _____

Expiration Date _____ M/C Bank No. _____

Signature _____ Date _____

Mail to: **AMAZING Stories**, P.O. Box 72089, Chicago, IL 60678.

AMAZING is a registered trademark owned by TSR, Inc.

©1988 TSR, Inc. All Rights Reserved.

Z

The **FUTURE FOCUS** **BOOK OF LISTS II**

"An amazing collection of interesting, amusing and occasionally brilliant material by a veritable Who's Who of Science Fiction. Unquestionably the publishing event of the semi-pro year."

—Hugo winner Mike Glickson

"**Future Focus # 16** is Roger's finest issue yet; more, it is one of the best...of the year, and surely deserves a place on the Hugo ballot."

—Mike Resnick, author of *Santiago* and *Stalking the Unicorn*

"There is one word that best describes this thing: MORE."

—Martin Caidin, author of *Cyborg*, *Marooned*, and *Zoboa*

"Roger Reynolds asked for lists, and he got them. Wry, witty, humorous, unusual. The **Future Focus Book of Lists II** is worth reading through; the art augments the text, and there are some surprises on each page."

—Hugo winner George "Lan" Lanowski

Fred Pohl
Larry Niven
L. Sprague de Camp
Marion Zimmer Bradley
Gregory Benford

C. J. Cherryh
Poul Anderson
Mercedes Lackey
Hal Clement

...AND MORE...

For your copy of the **Future Focus Book of Lists II**, please send a check or money order in U.S. funds for \$5.00 (\$4.00 + \$1.00 s&h) Roger Reynolds/
Future Focus, 1301 Bernard Ave., Findlay, OH 45840.

All profits received from FFBL2 will be donated to the Polly Freas Memorial Fund—
Roger "R2" Reynolds

Please include my friends and me in your special recruitment offer. I understand that I will receive two **free** issues of AMAZING® Stories for each friend I introduce to the magazine. All necessary information is provided below. The order form may be photocopied for additional subscribers.

RECRUITER

Name _____

Street _____

City _____ State/Prov. _____

Country _____ Postal Code _____

My subscription to AMAZING® Stories expires with issue#:

(see mailing label for issue date or number)

NEW SUBSCRIBER

Name _____

Street _____

City _____ State/Prov. _____

Country _____ Postal Code _____

Subscription Rates for 6 bi-monthly issues, (check one):

- ☐ In the U.S., and Canada, \$9 in U.S. funds **only**.
☐ Foreign via surface mail, \$25 per year in U.S. funds **only**.
☐ Foreign via air mail, \$50 per year in U.S. funds **only**.

Method of payment:

- ☐ Personal check enclosed ☐ MasterCard
☐ Money-order enclosed ☐ VISA

Credit Card Number _____

Expiration Date _____ M/C Bank No. _____

Signature _____ Date _____

Mail this card with enclosed payment to:

AMAZING® Stories

TSR, Inc.

P.O. Box 72089

Chicago, IL 60678

REC

AMAZING is a registered trademark owned by TSR, Inc.

©1988 TSR, Inc. All Rights Reserved.

SHARE AN EXCITING OFFER WITH A FRIEND

Rather than lend out your copies of AMAZING® Stories, why not treat your friends to a better offer? This special opportunity allows you and your friends to take part in a tradition that has been a major part of science fiction for the past 60 years. Here's how it works.

As a current subscriber, you are the person most suited to introduce your friends to AMAZING® Stories. Your friends will receive the latest works from some of the best authors in the fantasy and science-fiction genres. Each new issue will bring a host of book and movie critiques, insightful interviews and articles, beautiful artwork, lyrical poetry, and, of course, the intriguing fiction that has been the keynote of AMAZING® Stories for over 60 years.

By taking this offer, your friends will receive 6 bi-monthly issues of AMAZING® Stories for the low price of \$9 per year (in the U.S. and Canada). In addition, you will receive two free issues of AMAZING® Stories for every friend you recruit! Recruits must be new subscribers to qualify for this offer, and only current subscribers are allowed to serve as recruiters.

Take advantage of this special opportunity to share AMAZING® Stories with your friends!

AMAZING®

STORIES

The Best of AMAZING™ Stories

The Best of Science Fiction

The AMAZING™ Science Fiction Stories Anthologies include the best of AMAZING® Stories Magazine from 1926-1955. This collection of classic science fiction includes stories by science fiction greats Isaac Asimov, Ray Bradbury, H.P. Lovecraft, and Theodore Sturgeon.

You couldn't ask for anything better!

The Wonder Years

1926-1935

Edited by

Martin H. Greenberg



The War Years

1936-1945

Edited by

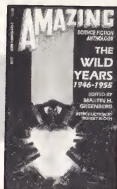
Martin H. Greenberg

The Wild Years

1946-1955

Edited by

Martin H. Greenberg



AMAZING and the TSR logo are trademarks owned by TSR, Inc. ©1987 TSR, Inc. All Rights Reserved